

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: WELL LOG _____ ELECTRIC LOGS _____ FILE ☒ WATER SANDS _____ LOCATION INSPECTED _____ SUB. REPORT add. _____

DATE FILED **4-1-91**

LAND: FEE & PATENTED _____ STATE LEASE NO. _____ PUBLIC LEASE NO. **U-48755** INDIAN _____

DRILLING APPROVED: **6-26-91 (EXCEPTION LOCATION)**

SPOUDED IN: _____

COMPLETED: **6-22-92 LA** PUT TO PRODUCING: _____

INITIAL PRODUCTION: _____

GRAVITY A.P.I. _____

GOR: _____

PRODUCING ZONES: _____

TOTAL DEPTH: _____

WELL ELEVATION: _____

DATE ABANDONED: **LA'D Per BLM EFF 6-22-92**

FIELD: **WILDCAT**

UNIT: _____

COUNTY: **GRAND**

WELL NO. **FEDERAL 1-13WM** API NO. **43-019-31321**

LOCATION **1708' FSL** FT. FROM (N) (S) LINE. **2272' FEL** FT. FROM (E) (W) LINE. **NW SE** 1/4 - 1/4 SEC. **13**

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
				25S	20E	13	COORS ENERGY COMPANY



March 29, 1991

State of Utah
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
355 West North Temple
Salt Lake City, Utah 84180-1203

Attn: Mr. Ron Firth

Dear Mr. Firth:

Enclosed for your approval we have enclosed a copy of the
APD to drill the following well:

Federal 1-13WM
Section 13, T25S-R20E
Grand County, Utah

If you have any questions regarding this Application or
will require additional information, please call me at the
phone number as shown below.

Thank you for your consideration.

Very truly yours,

Doug S. Sprague
Manager
Engineering & Operations

DSS:kr
Attachments

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DIVISION OF
OIL GAS & MINING

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. Type of Work
 DRILL ☒ DEEPEN ☐ PLUG BACK ☐

2. Type of Well
 Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone ☐

3. Name of Operator
Coors Energy Company

4. Address of Operator
PO Box 467, Golden, Colorado 80402

5. Location of Well (Report location clearly and in accordance with any State requirements.)
 At surface 1708' FSL, 2272' FEL, NW/SE
 At proposed prod. zone same

6. Distance in miles and direction from nearest town or post office*
approx. 7 miles SW of Moab/32.3 miles by road

7. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drlg. line, if any)
1708'

8. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.
None

9. Elevations (Show whether DF, RT, GR, etc.)
4788' GL

10. No. of acres in lease
2,556.64

11. Proposed depth
7500' CMLR

12. No. of acres assigned to this well
40

13. Rotary or cable tools
rotary

14. Approx. date work will start*
June, 1991

5. Lease Designation and Serial No.
U-48755

6. If Indian, Allottee or Tribe Name

7. Unit Agreement Name

8. Farm or Lease Name
Federal

9. Well No.
1-13WM

10. Field and Pool, or Wildcat
Wildcat 001

11. 00, Sec., T., R., M., or Slt. and Survey or Area
Sec. 13, T25S-R20E

12. County or Parish
Grand

13. State
Utah

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing / Type	Weight per Foot	Setting Depth	Quantity of Cement
17-1/2"	13-3/8" K55STC	54.50#	350'	300 sks.
12-1/4"	9-5/8" K55 STC	36.00#	2950'	500 sks.
7-7/8"	5-1/2" K55 LTC)	15.50#)	7500'	To be designed
	N80 LTC)	17.00#)		
	S95 LTC)	20.00#)		

See attached Multipoint Surface Use Plan and Drilling Program for details.

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. I hereby certify that this report is true and complete to the best of my knowledge.

Signature D.S. Sprague

Title Manager/Engineering/Operations

Date 3-29-91

(This space for Federal or State Office use)

API NO. 43-019-31301

Approval Date

APPROVED BY THE STATE

Approved by

Conditions of approval, if any:

Title

OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 6-26-91

BY: J.M. Matthews

WELL SPACING: 615-3-3

615-3-3

*See Instructions On Reverse Side

T25S, R20E, S.L.B.&M.

COORS ENERGY CO.

Well location, FEDERAL 1-13 WM, located as shown in the NW 1/4 SE 1/4 of Section 13, T25S, R20E, S.L.B.&M. Grand County, Utah.

BASIS OF ELEVATION

U.S.G.S. BENCH MARK ON A BRIDGE ABUTMENT IN THE NE 1/4 OF SECTION 19, T25S, R21E, S.L.B.&M. TAKEN FROM THE GOLD BAR CANYON QUADRANGLE, UTAH, GRAND & SAN JUAN COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON THE CAP AS BEING 4221.61'

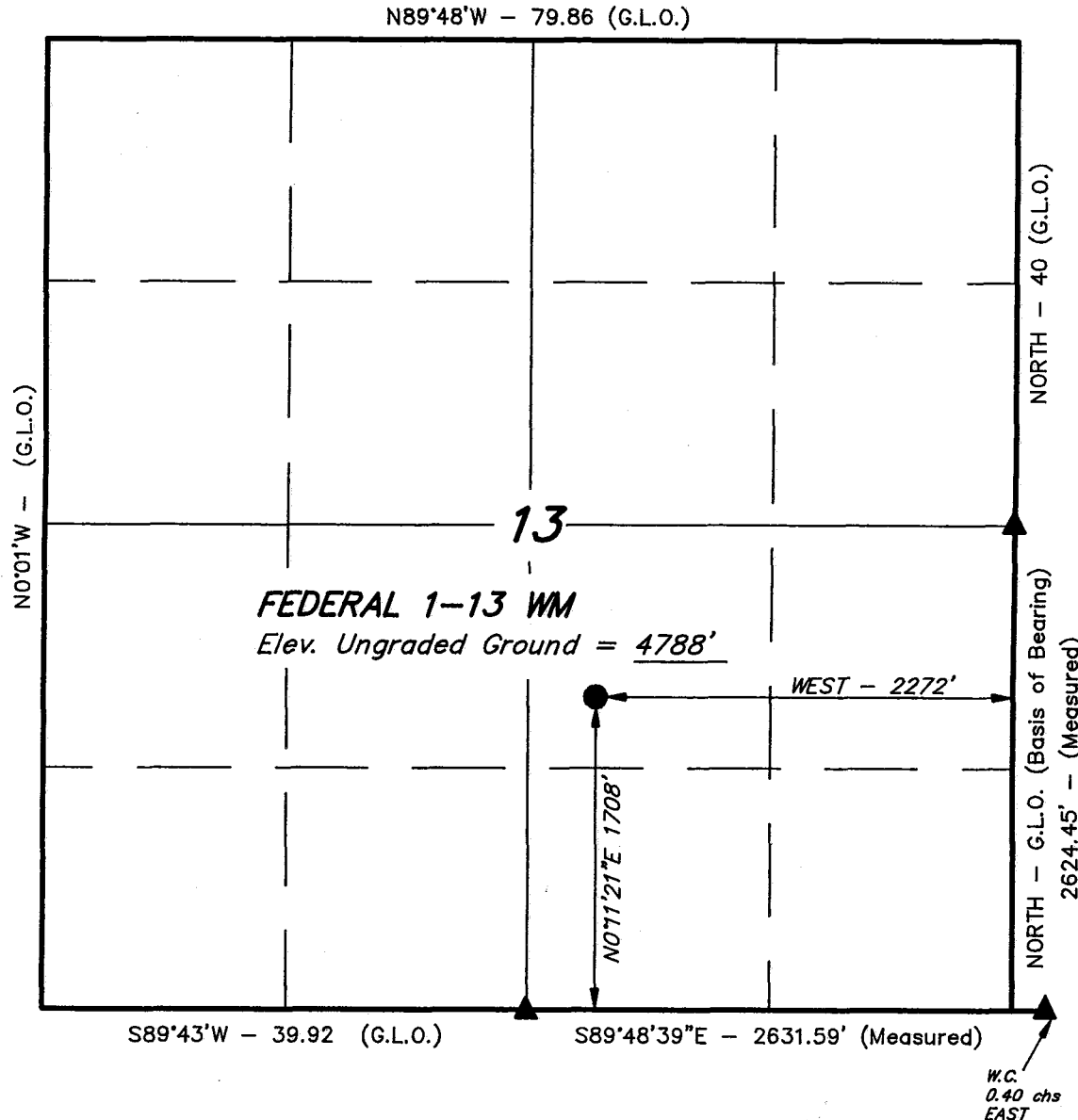


EXHIBIT "A"

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. Key
REGISTERED LAND SURVEYOR
REGISTRATION NO. 5789
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX 1758 - 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 1-31-91
PARTY J.T.K. H.C. R.E.H.	REFERENCES FIELD MAP - G.L.O. PLAT
WEATHER COLD	FILE COORS ENERGY CO.

▲ = SECTION CORNERS LOCATED. (BRASS CAPS)

MULTIPOINT SURFACE USE PLAN

COORS ENERGY COMPANY
FEDERAL 1-13WM
SECTION 13, T25S-R20E, NW/SE
GRAND COUNTY, UTAH
LEASE NO. U-48755

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Coors Energy Company will assure that this APD will be posted in the doghouse of the drilling rig during the drilling of this well. Also, a sign will be posted at the entrance to the location with the name of the well, operator and location description. We will notify the Moab BLM 48 hours prior to beginning any work on this land. Prior to starting surface construction operations, the dirt contractor shall have a completed approved copy of this APD.

1. EXISTING ROADS - See Exhibits C, D, E

Access to the Federal 1-13WM begins at Moab, Utah and proceeds northwesterly for approximately 10.9 miles to the Seven-Mile turnoff, turn left (west) and proceed along this road westerly for approximately 7.9 miles, and then southerly another 4.7 miles to a junction (Gemini Bridge cutoff), then turn left onto an existing access road, and proceed northeasterly another 8.3 miles to the proposed access road to the Federal 1-13WM location.

2. PLANNED ACCESS ROAD - See Exhibits C, D, E

The planned access road will be approximately 0.5 miles long. Surface disturbance and vehicular travel will be limited to approved location and access road. The access road will be rehabilitated within 60 days if the well is plugged and abandoned from the time the rig leaves the location. If for any reason, this is a problem, the Moab BLM will be notified.

Maintenance will consist of periodic grading and repairs to the surface. Rain and other inclement weather may require repairs to ditches, culverts, waterbars, if these are required. The road will be constructed as necessary for good drainage and to prevent washes, the road will be smooth, free of ruts, chuckholes, rocks, slides, etc. Any shoulders will be straight and have no berms.

The existing access road will require upgrading for approximately 4 miles before reaching the location. If there are steep grades, these will be cut and filled to meet an acceptable grade.

No surface gravel or dirt will be used from BLM sources. The new access road will be constructed with a 16' wide road surface. Not over 20' will be cleared to construct the new access road.

3. LOCATION OF EXISTING WELLS

Within a one-mile radius of this proposed well there is one P&A'd well:

Government Potash #7 located in Section 13, T25S-R20E.

There are no:

- a) known water wells
- b) temporarily abandoned wells
- c) disposal wells
- d) injection wells
- e) monitoring or observation wells
- f) drilling or completing wells

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

Coors Energy Company has no facilities in this area at this time. Any future production facilities will be located on the well pad and painted in an earth-tone color as specified by the BLM. If the well becomes a producer, a Sundry Notice will be provided to the BLM to request approval of the production facilities.

5. LOCATION AND TYPE OF WATER SUPPLY

Coors Energy Company is in the process of obtaining a water permit from the State of Utah to acquire water during the drilling of this well. Approximately 6000 barrels of water will be required to drill and complete this well. Upon receipt of the permit, a copy will be sent to you to include as part of this permit.

6. SOURCE OF CONSTRUCTION MATERIALS - See Exhibit B

The location contains approximately 1.28 acres. The top 6" of topsoil will be removed from the well pad and stored on the northeast side of the location. Topsoil along the access road will be left in place. Access to the location will be from the south corner of the pad. The reserve pit will be on the southeast side of the location. The pit will be lined with 10 mil plastic liner to conserve water. Fill materials needed to construct the location will be derived locally from cuts needed to build the well pad. Any artifacts found on BLM lands will be left in place and the BLM promptly notified.

7. METHODS FOR HANDLING WASTE DISPOSAL

Upon completion of the well, the mud reserve pit will be allowed to dry and then back-filled and the area restored according to BLM requirements.

The reserve pit will be fenced on three sides with 36" woven sheep wire with two strands of barbed wire on top of the sheep wire. If the well is a producer, upon completion of the drilling operations, the fourth side will be fenced. The fence around the reserve pit will be kept in good repair while the reserve pit is drying. Produced waste water will be confined to the pit for a period not to exceed ninety (90) days after initial production. During the ninety (90) day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

All garbage and trash will be placed in a trash cage and hauled to an appropriate disposal site. No burning of any trash will occur at the location. Trash, litter and construction materials will not be littered along roadways or drilling sites. Any disturbed area not required for producing operations will be restored according to BLM instructions. The production facilities will create no additional surface disturbances. A chemical-type toilet will be used on the wellsite.

8. ANCILLARY FACILITIES

There will be camp facilities on location as part of the drilling operations.

9. WELLSITE LAYOUT - See Exhibit B

A plat is attached showing the rig layout. All necessary surface equipment will be spotted on the 215' x 325' wellsite pad.

10. PLANS FOR RESTORATION OF SURFACE

Surface vegetation scraped off during drill site preparation will be removed and stockpiled prior to topsoil removal. Upon abandonment, vegetation will be redistributed as a mulching agent over the wellsite. The top 6" of topsoil will be stockpiled on the southeast corner of the well site as shown on the wellsite layout.

The reserve pit and that part of the location not needed for production operations will be reclaimed within 90 days after completion of the well. Revegetation and screening for visual effect will be done in accordance with BLM stipulations.

The original surface will be reconstructed as close as possible upon abandonment. The stockpiled topsoil will be spread over the area. Any solid waste material present prior to abandonment will be removed from the location. Any oil or harmful liquids will be removed by a pump truck to an approved disposal area.

Before any dirt work to restore the location takes place, the reserve pit will be completely dry and all trash will be removed. The access road will be blocked during restoration. Prior to reseeding, all disturbed areas, including the access road, will be scarified and left with a rough surface. The reserve pit, and that part of the location not needed for production, will be reclaimed in the same manner outlined in this Section. The rehabilitated access road will be blocked to prevent any vehicle use.

The topsoil will be tested to determine if fertilizer is needed to re-establish vegetation. After spreading the stockpiled topsoil, the following seed mixture or a similar seed mixture will be used to re-establish the vegetation:

Indian Ricegrass	2#/acre
Curlygrass	1#/acre
Sand Dropseed	1/2#/acre
Torrey Mormon Tea	1/2#/acre
Winterfat	1#/acre
Yellow Sweet Clover	1#/acre

The planting program will be completed as per BLM instructions at the time of site restoration.

Coors Energy Company will notify the BLM in Moab, Utah 48 hours prior to starting rehabilitation work.

11. OTHER INFORMATION - See Exhibit H

The Federal 1-13WM is located approximately 6-1/2 miles northwest of Moab, Utah.

It is Coors' policy that no Coors' employee nor subcontractors carry firearms on access roads nor onto the location during drilling or well completion operations of this well. No prospecting will be allowed on Coors' operations. All operators, subcontractors and vendors will be confined to established roads and wellsites.

The surface and mineral ownership of this property belongs to the Federal Government. Attached is a copy of Federal Lease Agreement U-48755 conveying approval to Coors Energy Company to drill on this land.

Due to Desert Big Horn sheep lambing, this well will not be drilled until after June 1, 1991.

12. COORS' CONTACTS

Doug Sprague
Manager, Engineering/Operations
Oil & Gas Operations
Coors Energy Company
PO Box 467
Golden, Colorado 80402
Phone: (303) 278-7030

Jim Simonton
Field Supervisor
Coors Energy Field Office
PO Box 460
Roosevelt, Utah 84066
Phone: (801) 722-2531

13. CERTIFICATION OF OPERATOR

See Exhibit "F" attached.

KR
3/25/91

DRILLING PROGRAM

Federal 1-13WM
Section 13, T25S-R20E, NW/SE
Grand County, Utah
Lease No. U-48755

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DIVISION OF
OIL GAS & MINING

Approval of this application does not warrant or certify that Coors Energy holds legal or equitable title to those rights in the subject lease which would entitle Coors Energy to conduct operations thereon.

All lease operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR Part 3160), Onshore Oil and Gas Orders, and the approved plan of operations. Coors Energy is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished to Jim Simonton, Coors Energy Field Supervisor, to ensure compliance.

DRILLING PROGRAM

The duration of drilling operations for this well will be approximately 25 days.

1. Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones are Expected to be Encountered.

This well will be spudded in the Moenkopi Formation. Oil and Gas is expected in the Cane Creek Formation. No aquifers or other mineral zones are anticipated. The following formation tops and their estimated depths are expected to be encountered in the drilling of this well.

Cutler: 350', Upper Hermosa: 1200', Desert Creek: 3800'
Cane Creek: 7780', Salt: 8020'

Fresh water is not anticipated during the drilling of this well. All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth and adequately protected.

2. Pressure Control Equipment, See Exhibit "C"

Coors Energy's pressure control equipment will consist of 3000 psi double rams and an annular preventer. The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment specifications and testing procedures. See Exhibit "C" - Blowout Prevention Equipment (diagram on front side of exhibit) and the configuration drawing of 3M Choke Manifold Equipment on the backside of the Exhibit.

Ram preventers will be tested to stack working pressure when test plug is used to isolate BOP's, if not isolated BOP's will be tested to a minimum of 70% of the internal yield of the casing. Annular preventers will be tested to 50% of rated working pressure. Pressures will be maintained at least 10 minutes.

Tests will be conducted when initially installed, following repairs and at 30-day intervals. Tests will be done prior to drilling out from under all casing strings cemented in place.

Rams will be operated each trip however this is required no more than once a day even though multiple trips may be made in a day. Ram operation will be recorded on the daily drilling reports.

Well control equipment will also consist of a float run in the drill string, and a full opening valve to fit the drill string will be on the rig floor at all times. Kelly cock valves will be used.

No abnormal temperatures are expected in most formations, however, abnormally high pressures are expected in the Desert Creek and Cane Creek formations. Maximum expected BHP is 5400 psi. High pressure gas pockets and saltwater flows may be encountered.

Coors Energy will notify the Moab District Office with sufficient lead time in order to have a BLM AO present to witness pressure testing.

3. Casing Program and Auxiliary Equipment

Coors Energy will use the following casing and cementing program for this well:

<u>SIZE OF HOLE</u>	<u>SIZE OF CASING</u>	<u>LBS/FOOT</u>	<u>SETTING DEPTH</u>	<u>QUANTITY OF CEMENT</u>
17-1/2"	13-3/8"	54.50#, K55-STC	350'	300 sks.
12-1/4"	9-5/8"	36.00#, K55-STC	2950'	500 sks.
7-7/8"	5-1/2"	15.50#, K55-LTC,)		
		17.00#, N80-LTC,)		
		20.00#, S95-LTC,)	7500'	To be designed

All casing is new with 8-round threads. All casing strings below conductor will be pressure tested to 0.22 psi per foot of setting depth or 1500 psi, whichever is greater, but not to exceed 70% of minimum internal yield.

Coors Energy will notify the Moab District Office, with sufficient lead time, in order to have a BLM representative on location while running all casing strings and cementing.

4. Mud Program and Circulating Medium

Surface hole will be drilled with air if spudded with rat hole rig or a gel-lime spud mud if drilled with rotary rig.

The proposed circulating medium below surface casing will be air, air mist or stiff foam. The hole may be displaced with a light brine to run intermediate casing. Below the intermediate casing a saturated salt mud will be used to drill the massive Paradox Salt section to TD.

No chromate additives will be used in the mud system on Federal and Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.

Mud properties will be checked daily to ensure an adequate mud system is maintained.

5. Coring, Logging and Testing Program

Coors Energy will send drilling and completion progress reports to the Moab District Office on a timely basis.

Sidewall cores may be taken in potential pay zones. A Density Neutron log will be run from 3500' to TD. A Dual Laterolog will be run from TD to surface. Coors Energy reserves the right to change the logging program.

Any Drill Stem tests (DST) that may be run, shall be accomplished during daylight hours. However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e., lighting which is adequate for visibility and vaporproof for safe operations). Packers can be released, but tripping should not begin before daylight.

A cement bond log (CBL), or some other means acceptable to the authorized officer, shall be utilized to determine the top of cement (TOC) for the intermediate and production casing.

Whether the well is completed as a dry hole or as a producer, a "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Copies of electric logs, core descriptions and analyses will be filed with Form 3160-4. If any further information is requested, it will be submitted when requested by the authorized officer (AO).

6. Notifications of Operations

No locations will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.

Coors Energy will report the spud date orally to the AO within 48 hours after spudding. If the spudding occurs on a weekend or holiday, the report will be submitted on the following regular work day. The oral report will be followed up with a Sundry Notice.

Coors Energy shall report production data to MMS pursuant to 30 CFR 216.5 using form MMS/3160.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.

If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.

Should the well be successfully completed for production, the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than 5 days following the date on which the well is placed on production.

Pursuant to NTL-2B, with the approval of a District Engineer, produced water may be temporarily disposed of into unlined pits for a period of up to 90 days. During the period so authorized, an application for approval of the permanent disposal method, along with the required water analysis and other information, must be submitted to the District Engineer.

Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMCF following its completion, whichever occurs first, without the prior written approval of the authorized officer. Should gas be vented or flared without approval beyond the authorized test period, the operator may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted and the operator shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.

Coors Energy shall submit a schematic facilities diagram as required by 43 CFR 3162.7-2, 3162.7-3, and 3162.7-4 to the appropriate District Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in 43 CFR 3162.7 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-4.

A first production conference will be scheduled within 15 days after receipt of the first production notice.

No well abandonment operations will be commenced by Coors Energy without the prior approval of the AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the AO. A "Subsequent Report of Abandonment" Form 3160-5, will be filed with the AO within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the AO or his representative, or the appropriate Surface Managing Agency.

Pursuant to Onshore Oil and Gas Orders, Coors Energy has the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which conforms with applicable Federal laws and regulations and with State and local laws and regulations to the extent that such State and local laws are applicable to operations on Federal or Indian lands.

7. Other Information

All loading lines will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the AO.

A gas allocation meter will be located on the Federal 1-13WM battery. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Moab District Office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

In addition, the use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

Coors Energy understands there will be no deviation from the proposed drilling and/or workover program without prior approval from the AO. Safe drilling and operating practices will be observed. All Coors Energy's wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.

Sundry Notices (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or Sundry Notice, Form 3160-5, or orally to be followed by a letter or Sundry Notice, of the date on which such production has begun or resumed."

Coors Energy understands that the date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever first occurs.

If Coors Energy fails to comply with this requirement in the manner and time allowed, Coors Energy will be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109(c)(3) of the Federal Oil and Gas Royalty Management act of 1982 and the implementing regulations of Title 43 CFR 3162.4-1(b)(5)(ii).

Coors Energy understands the APD approval is valid for a period of one (1) year from the signature date. An additional one (1) year approval period may be granted, if requested, prior to the expiration of the original approval period.

/kr

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DIVISION OF
OIL GAS & MINING

COORS ENERGY CO.

LOCATION LAYOUT FOR

FEDERAL 1-13 WM

SECTION 13, T25S, R20E, S.L.B. & M.

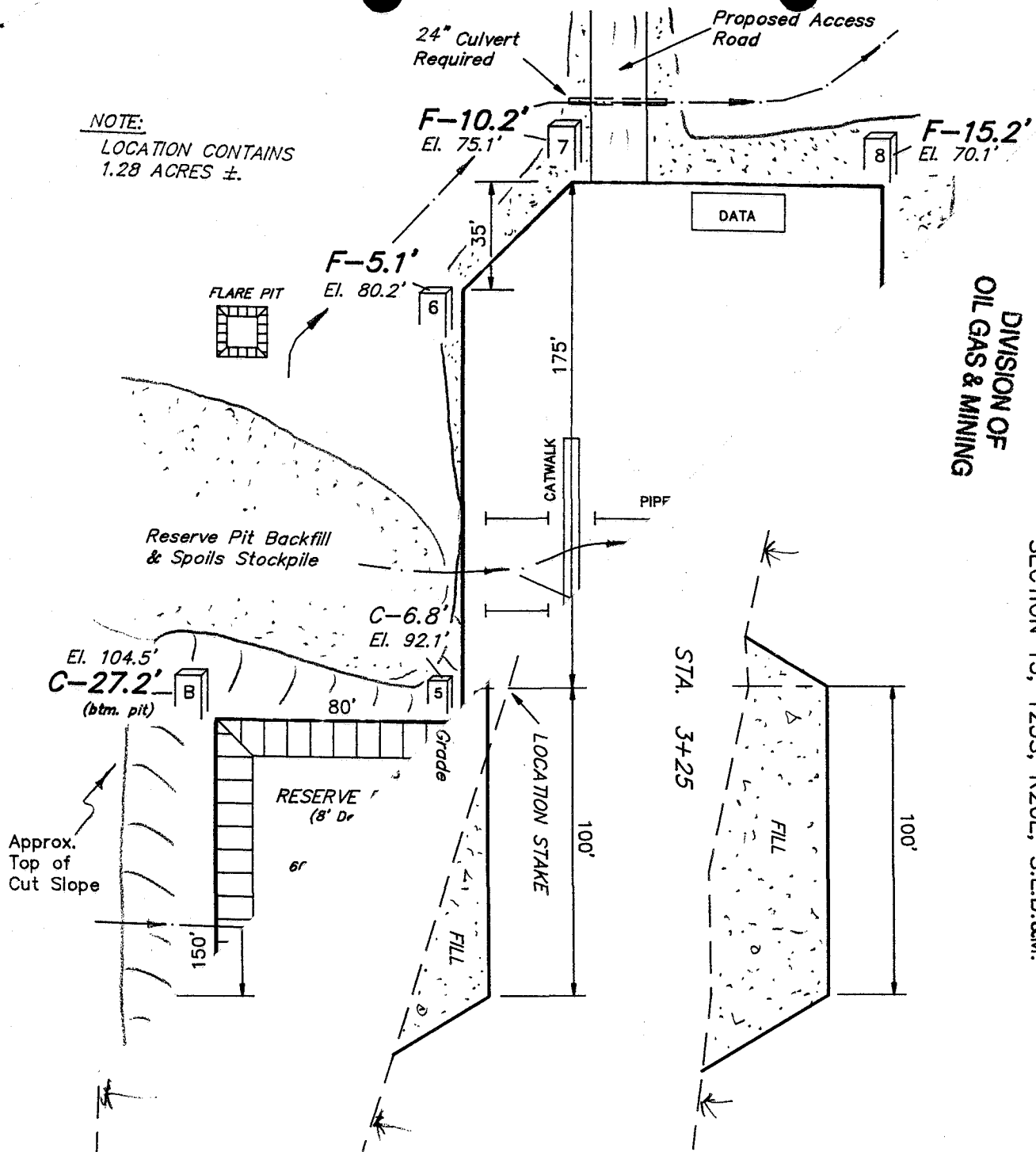
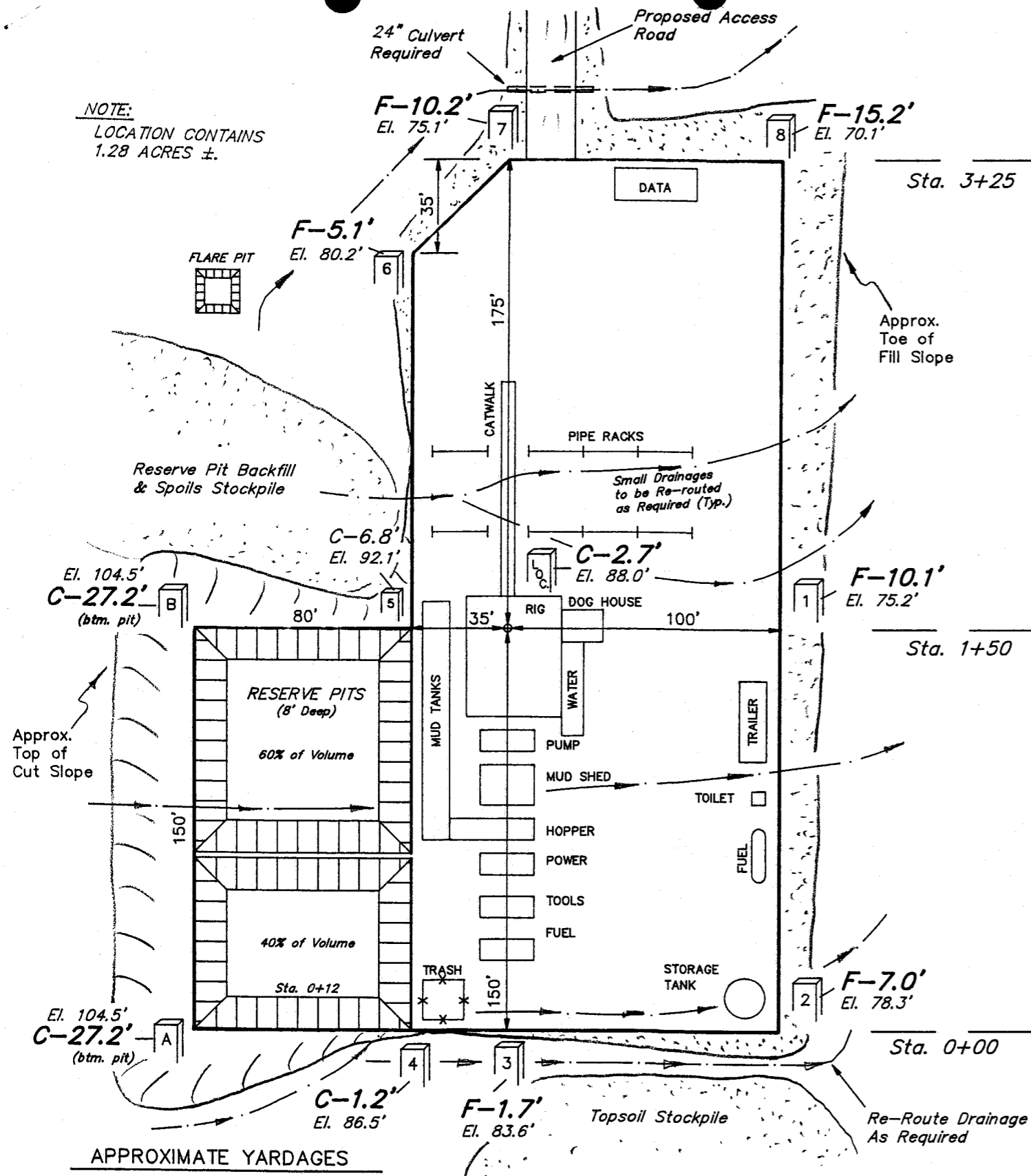


EXHIBIT "B"

NOTE:
LOCATION CONTAINS
1.28 ACRES ±.



(6") Topsoil Stripping	= 1,030 Cu. Yds.
Pit Volume (Below Grade)	= 2,520 Cu. Yds.
Remaining Location	= 9,810 Cu. Yds.
TOTAL CUT	= 13,360 CU.YDS.
FILL	= 10,420 CU.YDS.

EXCESS MATERIAL AFTER 5% COMPACTION	= 2,390 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 2,290 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 100 Cu. Yds.

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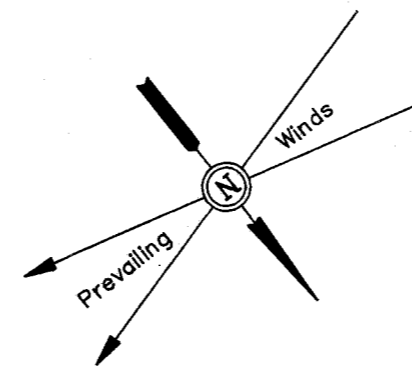
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DIVISION OF
OIL GAS & MINING

COORS ENERGY CO.

LOCATION LAYOUT FOR

FEDERAL 1-13 WM
SECTION 13, T25S, R20E, S.L.B.&M.

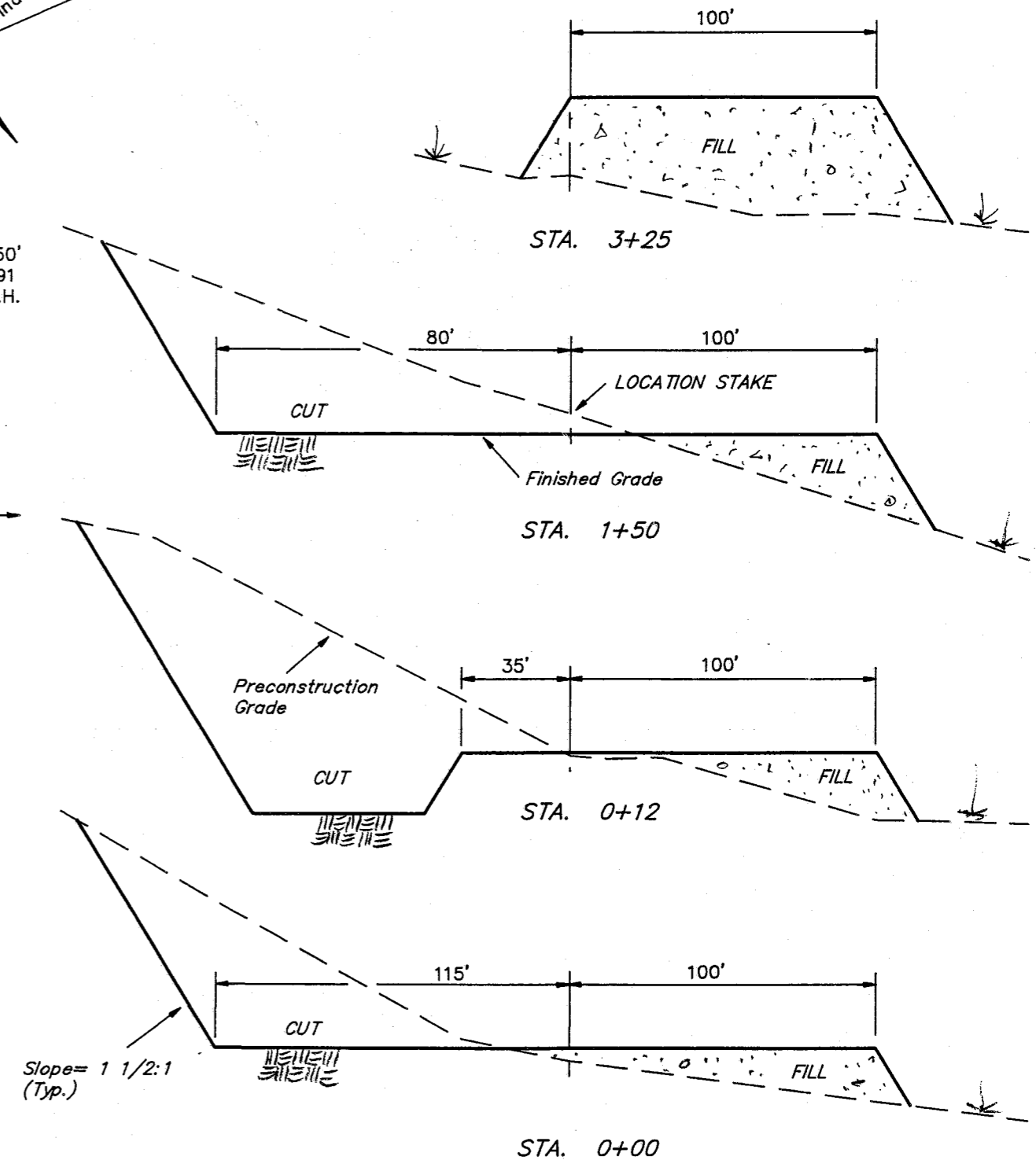


SCALE: 1" = 50'
DATE: 1-31-91
Drawn By: T.D.H.

X-Section
Scale
1" = 50'

TYP.
LOCATION
LAYOUT

TYP.
CROSS
SECTIONS



Elev. Ungraded Ground at Location Stake = 4788.0'

Elev. Graded Ground at Location Stake = 4785.3'

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East Vernal, Utah

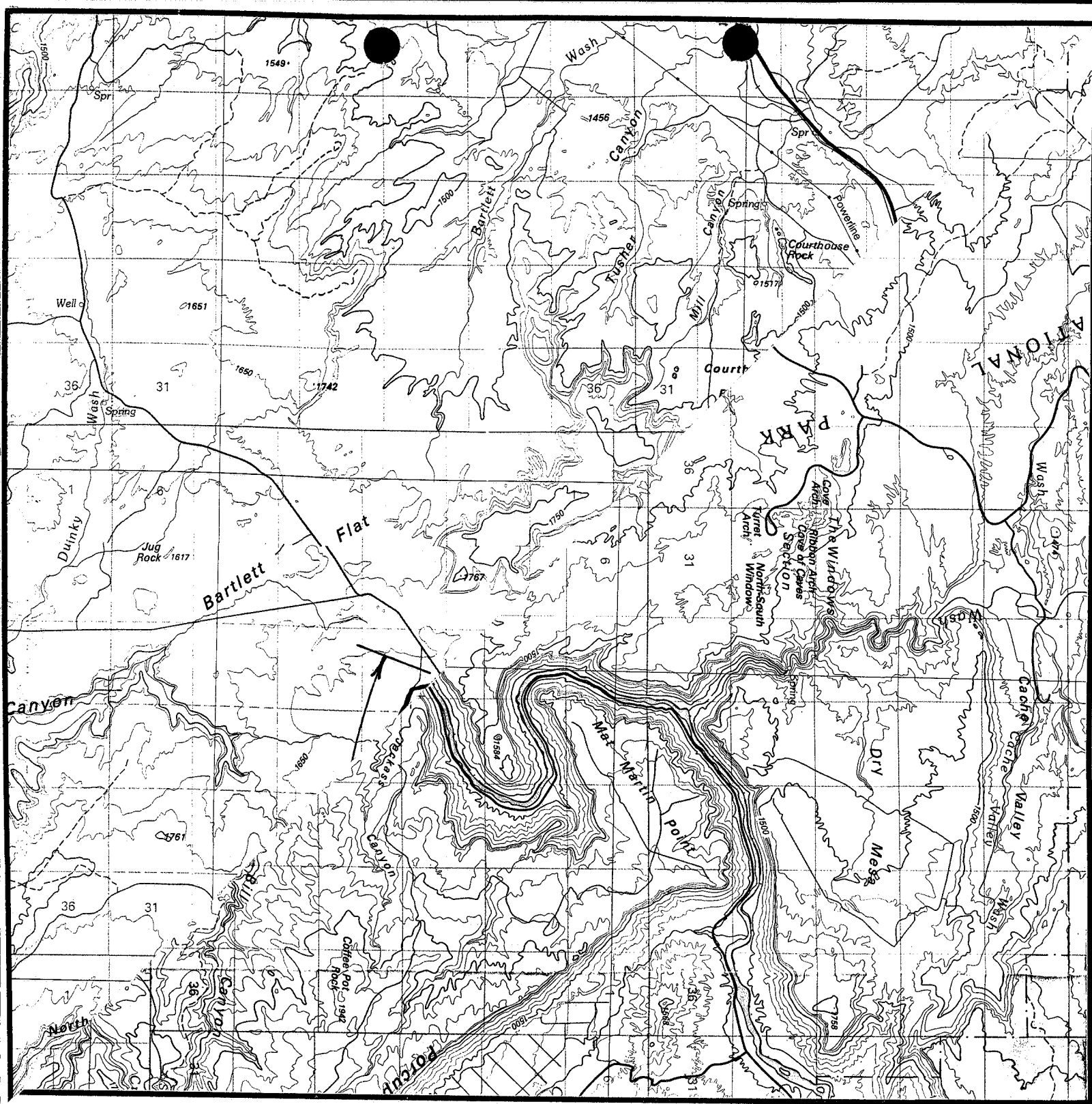
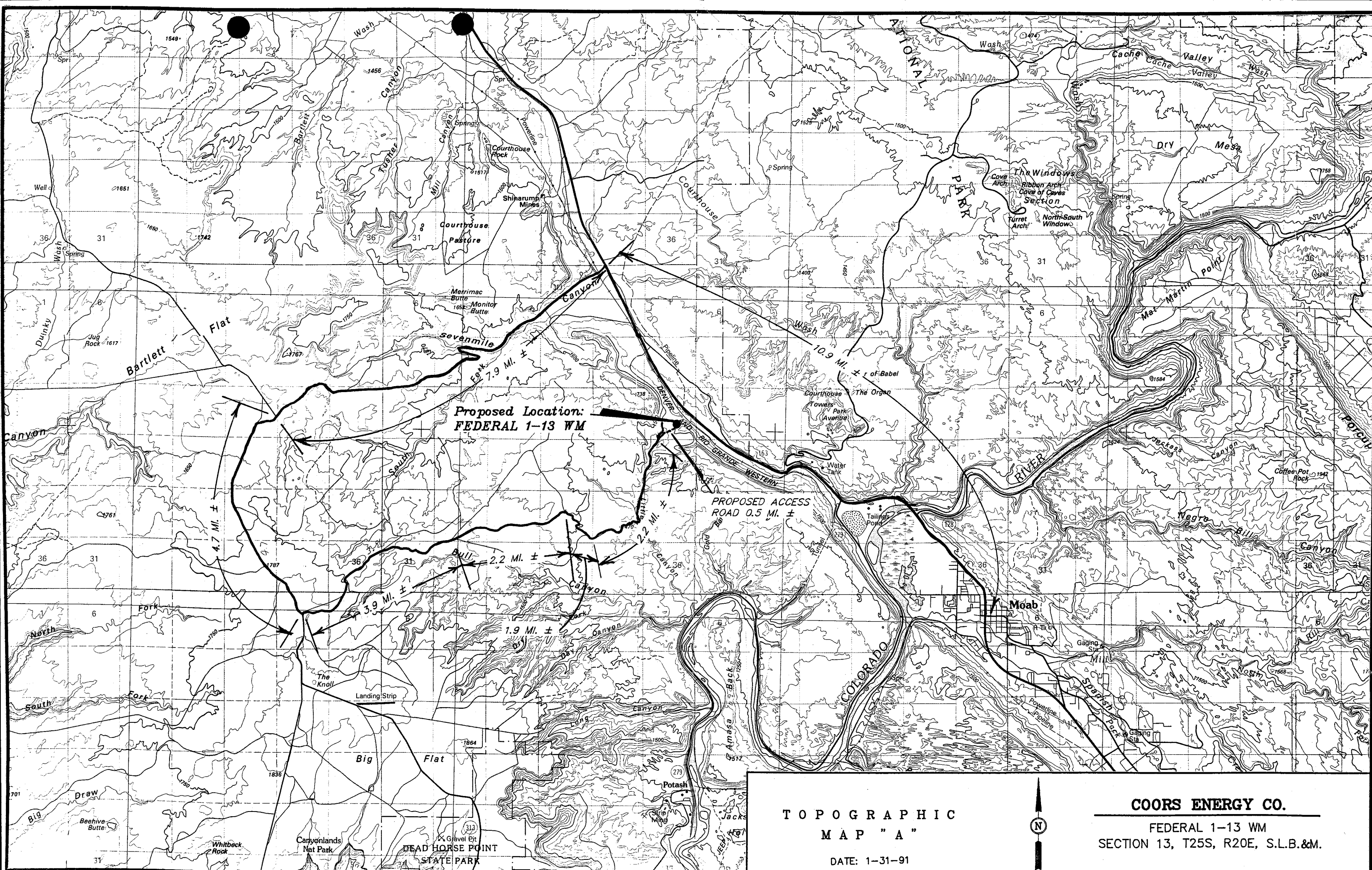
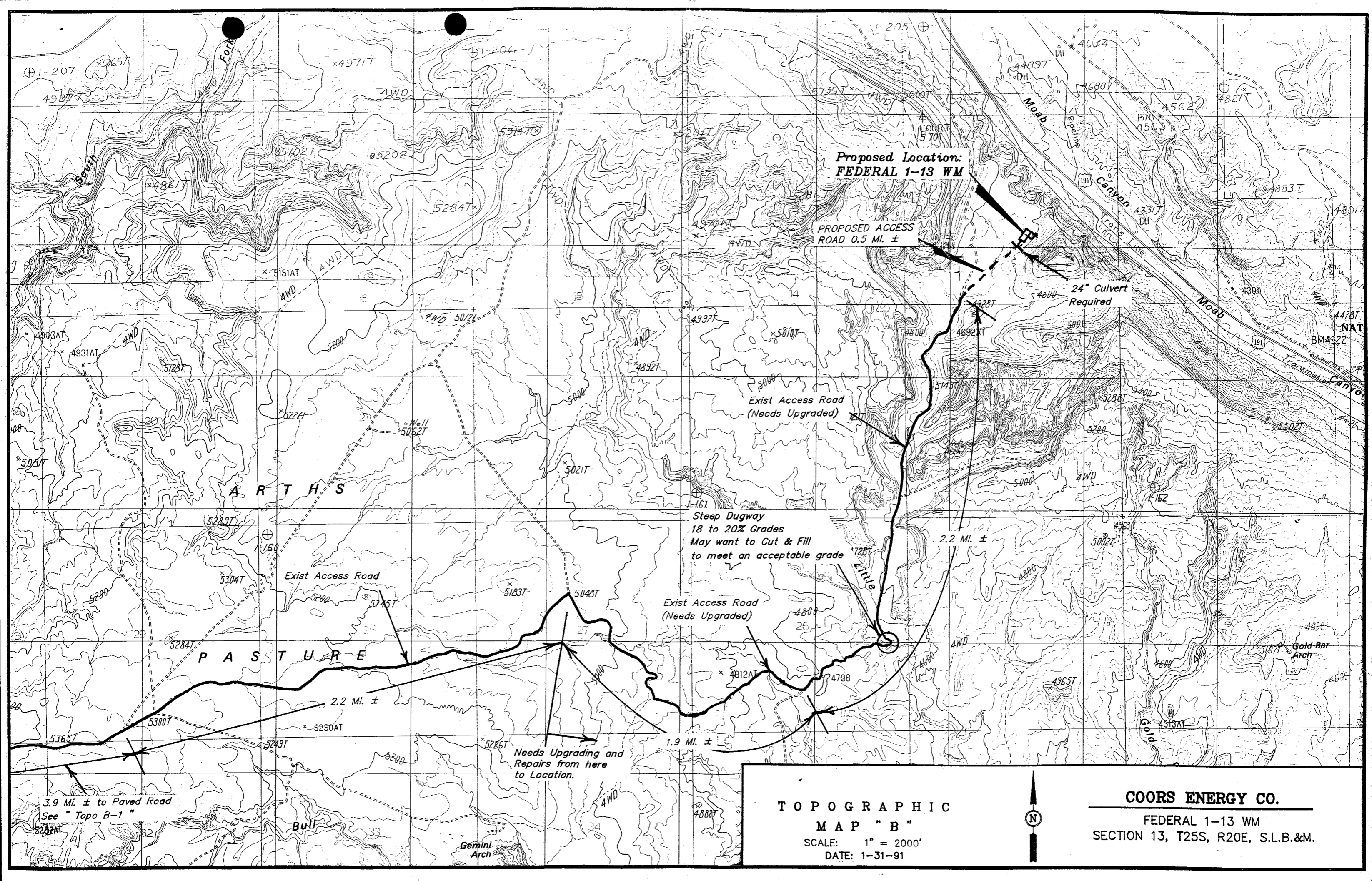


EXHIBIT "C"

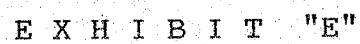


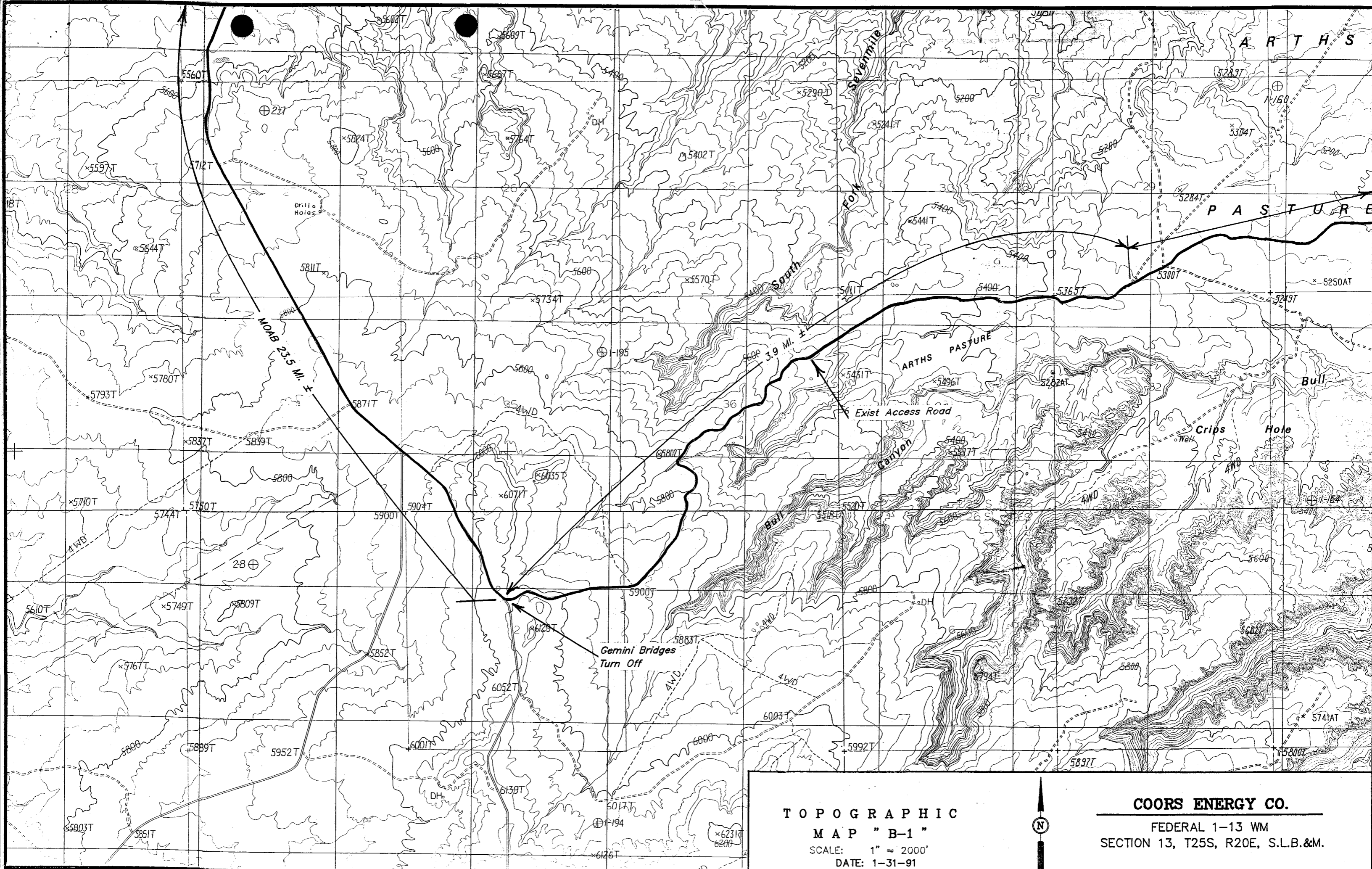


TOPOGRAPHIC
MAP "B"
SCALE: 1" = 2000'
DATE: 1-31-91



COORS ENERGY CO.
FEDERAL 1-13 WM
SECTION 13, T25S, R20E, S.L.B.&M.







CERTIFICATION BY OPERATOR'S FIELD REPRESENTATIVE

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true, complete, and correct; and that the work associated with this plan will be carried on by Coors Energy Company, and its contractors and subcontractors, in conformity with the plan and the terms and conditions under which it is approved.

March 29, 1991
Date

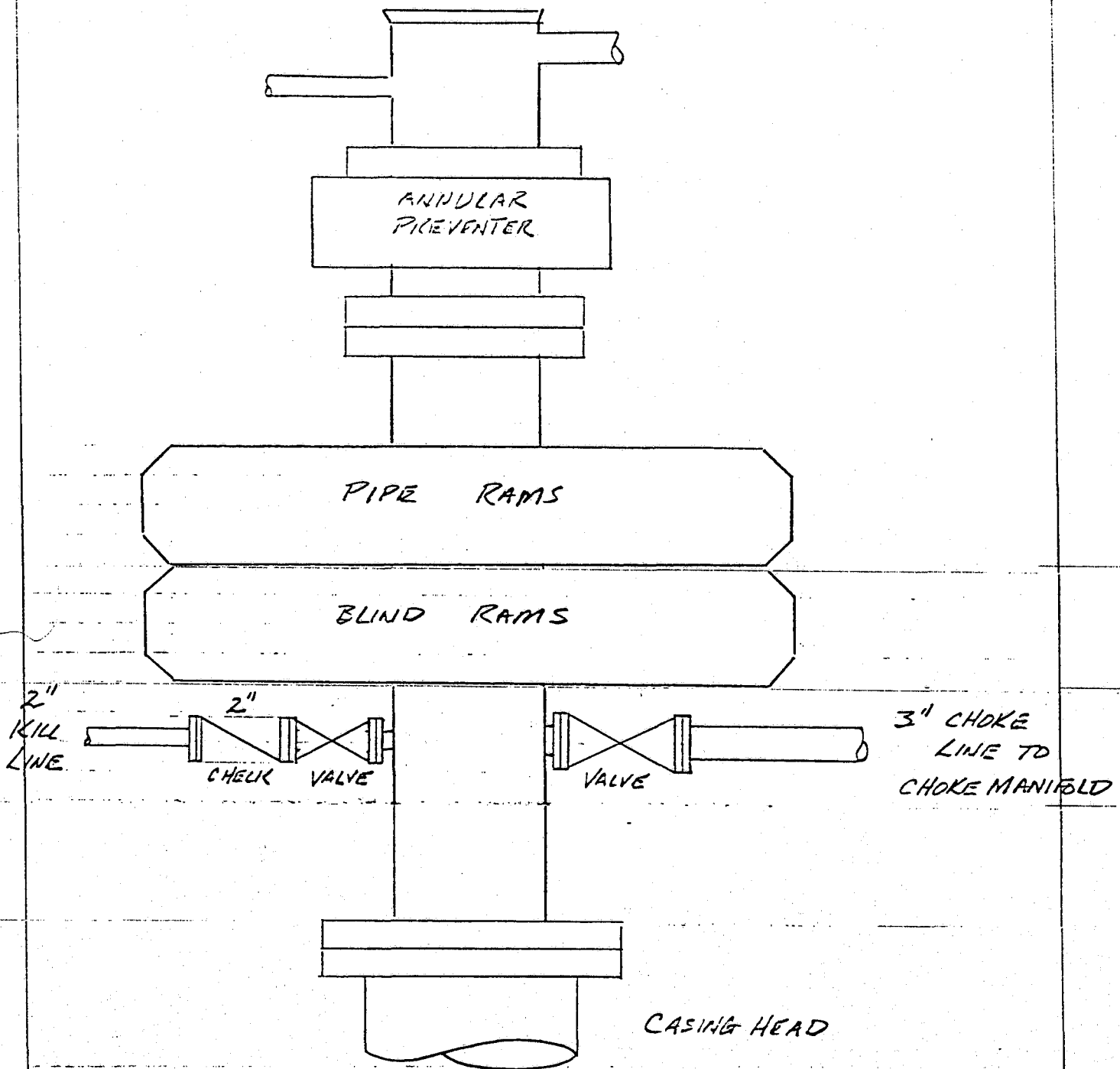
D.S. Sprague
D.S. Sprague
Manager
Engineering and Operations

DSS:kr

EXHIBIT "F"

BLOWOUT PREVENTION EQUIPMENT

3000 PSI W.P.



1. ANNULAR PREVENTER

2. DOUBLE RAM, PIPE AND BLIND RAMS WITH 2 SIDE OUTLETS FOR KILL AND CHOKER LINES, ALTERNATIVE WOULD BE TO USE DRILLING SPOOL WITH 2 SIDE OUTLETS.

RECEIVED

Form 3106-5
(October 1982)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 01 1991

FORM APPROVED
OMB NO. 1004-0034
Expires: August 31, 1985

ASSIGNMENT AFFECTING RECORD TITLE
TO OIL AND GAS LEASE

DIVISION OF
OIL GAS & MINING

Lease Serial No.
U-48755
Lease effective date
October 1, 1981
FOR BLM OFFICE USE ONLY

New Serial No.

PART 1

1. Assignee's Name

Coors Energy Company

Address (include zip code)

P.O. Box 467, Golden, Colorado 80402

The undersigned, as owner of 65.69082% percent of the record title of the above-designated oil and gas lease, hereby transfers and assigns to the assignee shown above, the record title interest in and to such lease as specified below.

2. Describe the lands affected by this assignment

Assignment approved as to lands described below

T25S-R20E, SLM

Section 3: Lots 1-16, N/2 SW/4,
SE/4 SW/4, SE/4
Section 11: All
Section 13: All
Section 14: NE/4, NE/4 NW/4, NE/4
SE/4
Section 24: NE/4

Grand County, Utah

Same land as Item 2

EXHIBIT "H"

3. Specify interest or percent of assignor's record title interest being conveyed to assignee	65.69082%
4. Specify interest or percent of record title interest being retained by assignor, if any	NONE
5. Specify overriding royalty being reserved by assignor	2.25% of 65.69082%
6. Specify overriding royalty previously reserved or conveyed, if any	5.0%

7. If any payments out of production have previously been created out of this lease, or if any such payments are being reserved under this assignment, attach statement giving full details as to amount, method of payment, and other pertinent terms as provided under 43 CFR 3106.

It is agreed that the obligation to pay any overriding royalties or payments out of production of oil created herein, which, when added to overriding royalties or payments out of production previously created and to the royalty payable to the United States, aggregate in excess of 17 1/2 percent, shall be suspended when the average production of oil per well per day averaged on the monthly basis is 15 barrels or less.

*See rider attached hereto and made a part hereof

I CERTIFY That the statements made herein are true, complete, and correct to the best of my knowledge and belief and are made in good faith.

Executed this 23rd day of September, 1986

SAMSON RESOURCES COMPANY

David F. Collins

(Assignor's Signature)

David F. Collins, President

ATTEST:

Thomas C. Coleman

Thomas C. Coleman, Assistant Secretary

Samson Plaza, Two West Second Street

(Assignor's Address)

Tulsa, Oklahoma 74103

(City)

(State)

(Zip Code)

Title 18 U.S.C., Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

THE UNITED STATES OF AMERICA

Assignment approved effective NOV 1 1986

By

Rabulopez

(Authorized Officer)

CHIEF, MINERAL
ADJUDICATION SECTION

(Title)

OCT 20 1986

(Date)

APPROVAL DOES NOT WARRANT THAT
EITHER PARTY TO THIS TRANSFER
HOLDS LEGAL OR EQUITABLE TITLE
TO THIS LEASE.

Form 3106-5
(November 1981)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB NO. 1004-0034
Expires: February 28, 1982

APR 01 1991

Lease Serial No.
199148755

Lease effective date
October 1, 1981

FOR BLM OFFICE USE ONLY
New Serial No.

DIVISION OF
OIL GAS & MINING

ASSIGNMENT AFFECTING RECORD TITLE
TO OIL AND GAS LEASE

PART I

1. Assignee's Name

Goors Energy Company

Address (include zip code)

P. O. Box 467, Golden, Colorado 80401

The undersigned, as owner of 100 percent of the record title of the above-designated oil and gas lease, hereby transfers and assigns to the assignee shown above, the record title interest in and to such lease as specified below.

2. Describe the lands affected by this assignment

Assignment approved as to lands described below

T25S-R2E2, SIM

Section 8: Lots 1-16, R/2 SW/4,
SE/4 SW/4, SE/4

Section 11: All

Section 13: All

Section 14: NE/4, SE/4 NW/4, SE/4
SE/4

Section 24: NE/4

Grand County, Utah

Burns Road as shown

Approval of the assignment does not constitute approval of any of the provisions of the supplemental agreements attached hereto or incorporated herein which may be contrary to the lease terms.

3. Specify interest or percent of assignor's record title interest being conveyed to assignee

34.309137

4. Specify interest or percent of record title interest being retained by assignor, if any

65.690827

5. Specify overriding royalty being reserved by assignor to be borne 34.30913% by assignee

1.00%

6. Specify overriding royalty previously reserved or conveyed, if any to be borne 34.30913% by assignee

5.00%

7. If any payments out of production have previously been created out of this lease, or if any such payments are being reserved under this assignment, attach statement giving full details as to amount, method of payment, and other pertinent terms as provided under 43 CFR 3106.

It is agreed that the obligation to pay any overriding royalties or payments out of production of oil created herein, which, when added to overriding royalties or payments out of production previously created and to the royalty payable to the United States, aggregate in excess of 17 1/2 percent, shall be suspended when the average production of oil per well per day averaged on the monthly basis is 15 barrels or less.

I CERTIFY That the statements made herein are true, complete, and correct to the best of my knowledge and belief and are made in good faith.

Executed this 1st day of December, 1982.

SAISON PROPERTIES COMPANY

Charles C. Stanford
Vice President

2700 First National Tower

(Assignor's Address)

Tulsa, Oklahoma

74102

(City)

(State)

(Zip Code)

Title 18 U.S.C., Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

THE UNITED STATES OF AMERICA

FEB 01 1983

Assignment approved effective

By

(Authorized Officer)

96369

(Title)

(Date)

JAN 12 1983

Form 3110-2
(January 1978)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Ent No. 395571
Recorded 2-1-82 10:30 AM
Bk. 333 Pg. 544-548 Fee 10.50
Lilly Mae Noorlander
Lilly Mae Noorlander
Recorder of Grand County

LEASE FOR OIL AND GAS
(Sec. 17 Noncompetitive Public Domain Lease)
Act of February 25, 1920 (41 Stat. 437), as amended (30 U.S.C. 181-263)

Name Jay H. Smith
Street P. O. Box 79457
City Houston, TX
State 77079
Zip Code

U-48755
(Serial Number)

This oil and gas lease is issued for a period of ten (10) years to the above-named lessee pursuant and subject to the provisions of the Mineral Leasing Act and subject to all rules and regulations of the Secretary of the Interior now or hereafter in force, when not inconsistent with any express and specific provisions herein, which are made a part hereof.

Lands included in the lease: State: Utah County: Grand

T. 25 S., R. 20 E., SLM, Utah
Sec. 3, lots 1-16, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$,
SE $\frac{1}{4}$;
Secs. 11, and 13, all;
Sec. 14, NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$;
Sec. 24, NE $\frac{1}{4}$.

RECEIVED
APR 01 1991
DIVISION OF
OIL GAS & MINING

CLEARED BY GS

Containing a total of <u>2,556.64</u> acres	Annual Rental \$ <u>2,557.00</u>
---	--

This lease is issued to the successful drawee pursuant to his "Simultaneous Oil and Gas Entry Card" application filed under 43 CFR 3112, and is subject to the provisions of that application and those specified on the reverse side hereof.

Effective date of lease: OCT 1 1981

THE UNITED STATES OF AMERICA

By *Robert Lopez*
(Signature of Signing Officer)
Chief, Minerals Section
(Title)

Jay H. Smith
(Signature of Offeror/Lessee)

9/4/81
(Date)

SEP 25 1981
(Date)

I certify that this is the true signature of Robert Lopez,
Chief of Minerals Section, Bureau of Land Management.

Paul P. Hattenger
Notary Public
544
FEB 17 1982

RECEIVED

APR 01 1991

DIVISION OF
OIL GAS & MINING

This lease is issued pursuant and subject, to the extent applicable, to the terms and provisions of Section 302 of the Department of Energy Organization Act (12 U.S.C. 7152) and to the regulations of the Secretary of Energy promulgated thereunder relating to the:

(1) fostering of competition for Federal leases (including but not limited to, prohibition on bidding for development rights by certain types of joint ventures);

(2) implementation of alternative bidding systems authorized for the award of Federal leases;

(3) establishment of diligence requirements for operations conducted on Federal leases (including, but not limited to, procedures relating to the granting or ordering by the Secretary of the Interior of suspension of operations or production as they relate to such requirements);

(4) setting rates of production for Federal leases; and

(5) specifying the procedures, terms, and conditions for the acquisition and disposition of Federal royalty interests taken in kind.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SURFACE DISTURBANCE STIPULATIONS

Area Oil and Gas Supervisor or
District Engineer (Address, include zip code)
District Oil and Gas Supervisor
Geological Survey
2000 Administration Building
1745 West 1700 South
Salt Lake City, UT 84104

Management Agency (name)

SEE REVERSE SIDE

Address (include zip code)

SEE REVERSE SIDE

1. Notwithstanding any provision of this lease to the contrary, any drilling, construction, or other operation on the leased lands that will disturb the surface thereof or otherwise affect the environment, hereinafter called "surface disturbing operation," conducted by lessee shall be subject, as set forth in this stipulation, to prior approval of such operation by the Area Oil and Gas Supervisor in consultation with appropriate surface management agency and to such reasonable conditions, not inconsistent with the purposes for which this lease is issued, as the Supervisor may require to protect the surface of the leased lands and the environment.

2. Prior to entry upon the land or the disturbance of the surface thereof for drilling or other purposes, lessee shall submit for approval two (2) copies of a map and explanation of the nature of the anticipated activity and surface disturbance to the District Engineer or Area Oil and Gas Supervisor, as appropriate, and will also furnish the appropriate surface management agency named above, with a copy of such map and explanation.

An environmental analysis will be made by the Geological Survey in consultation with the appropriate surface management agency for the purpose of assuring proper protection of the surface, the natural resources, the environment, existing improvements, and for assuring timely reclamation of disturbed lands.

3. Upon completion of said environmental analysis, the District Engineer or Area Oil and Gas Supervisor, as appropriate, shall notify lessee of the conditions, if any, to which the proposed surface disturbing operations will be subject.

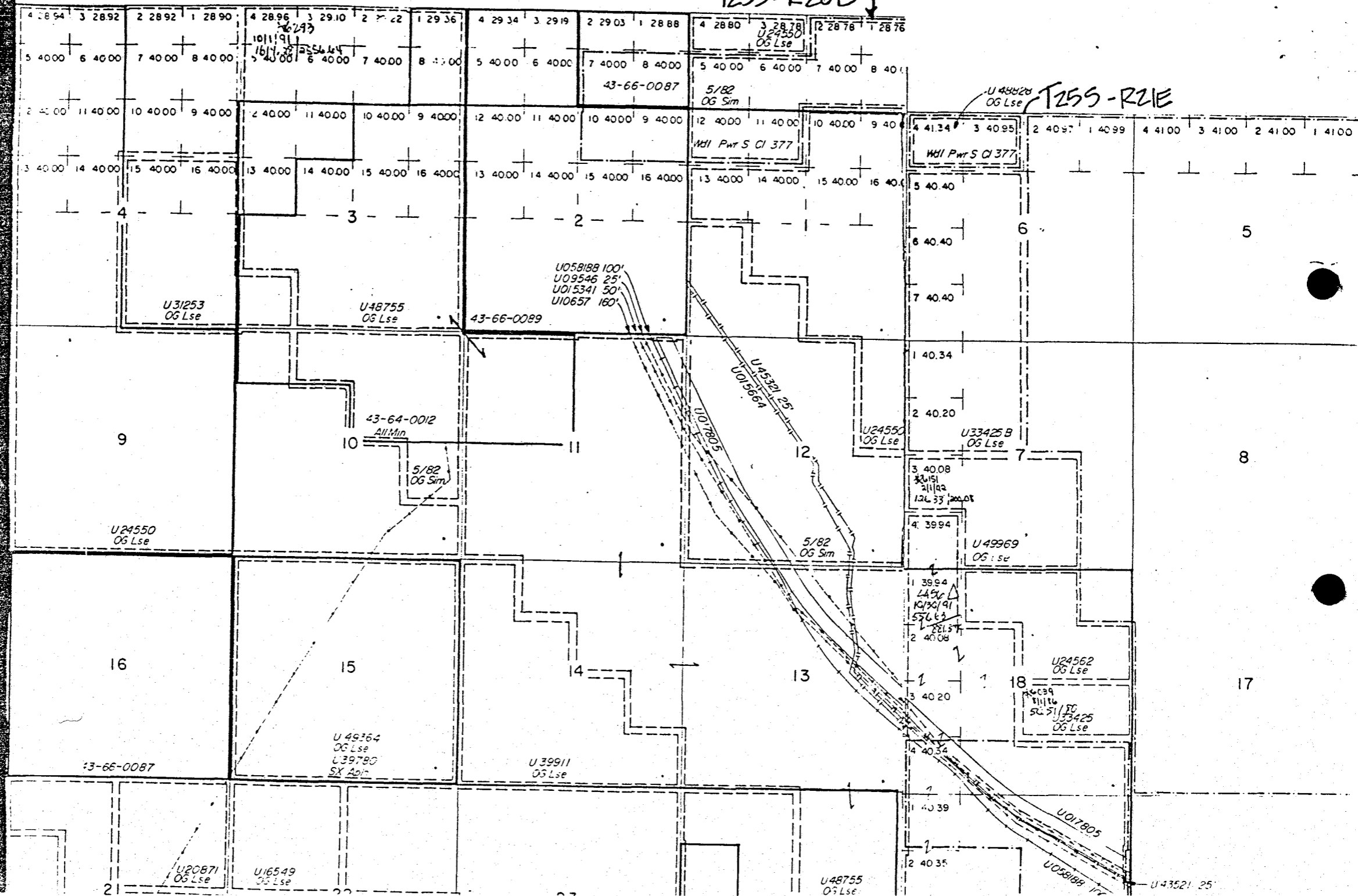
Said conditions may relate to any of the following:

- (a) Location of drilling or other exploratory or developmental operations or the manner in which they are to be conducted;
- (b) Types of vehicles that may be used and areas in which they may be used; and
- (c) Manner or location in which improvements such as roads, buildings, pipelines, or other improvements are to be constructed.

547

6293

1255-K20E

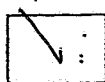


OPERATOR Coors Energy Company N-5090 DATE 4-4-91
WELL NAME Federal 1-13Wm
SEC NWSE 13 T 05S R 00E COUNTY Grand

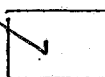
43-019-31301
API NUMBER

Federal (1)
TYPE OF LEASE

CHECK OFF:



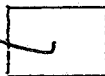
PLAT.



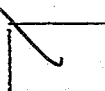
BOND



NEAREST
WELL



LEASE



FIELD
SLBM



POTASH OR
OIL SHALE

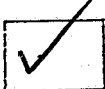
PROCESSING COMMENTS:

No other well in above section.
Water Permit (none) received 5-6-91 01-1080 (T65090)
ROCC 4-4-91
Potash area
Eruption Location

APPROVAL LETTER:

West Mowb Valley

SPACING:

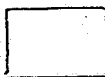


R615-2-3

N/A
UNIT



R615-3-2



N/A
CAUSE NO. & DATE



R615-3-3

STIPULATIONS:

Water permit
Potash stipulation
Preventers for Pressure Control equipment
nipped up on 9 5/8" casing will be 5000 psi
equipment.



RECEIVED

APR 10 1991

DIVISION OF
OIL GAS & MINING

April 8, 1991

State of Utah
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
355 West North Temple
Salt Lake City, Utah 84180-1203

Gentlemen:

Please be advised that we are requesting an exception to well spacing for the following well:

Federal 1-13WM
Section 13, T25S-R20E
Grand County, Utah

Due to topography as the area is covered with pure ledge rock, we had to move this location to 1708'FSL and 2272'FEL in Section 13, T25S-R20E, see copy of survey plat attached.

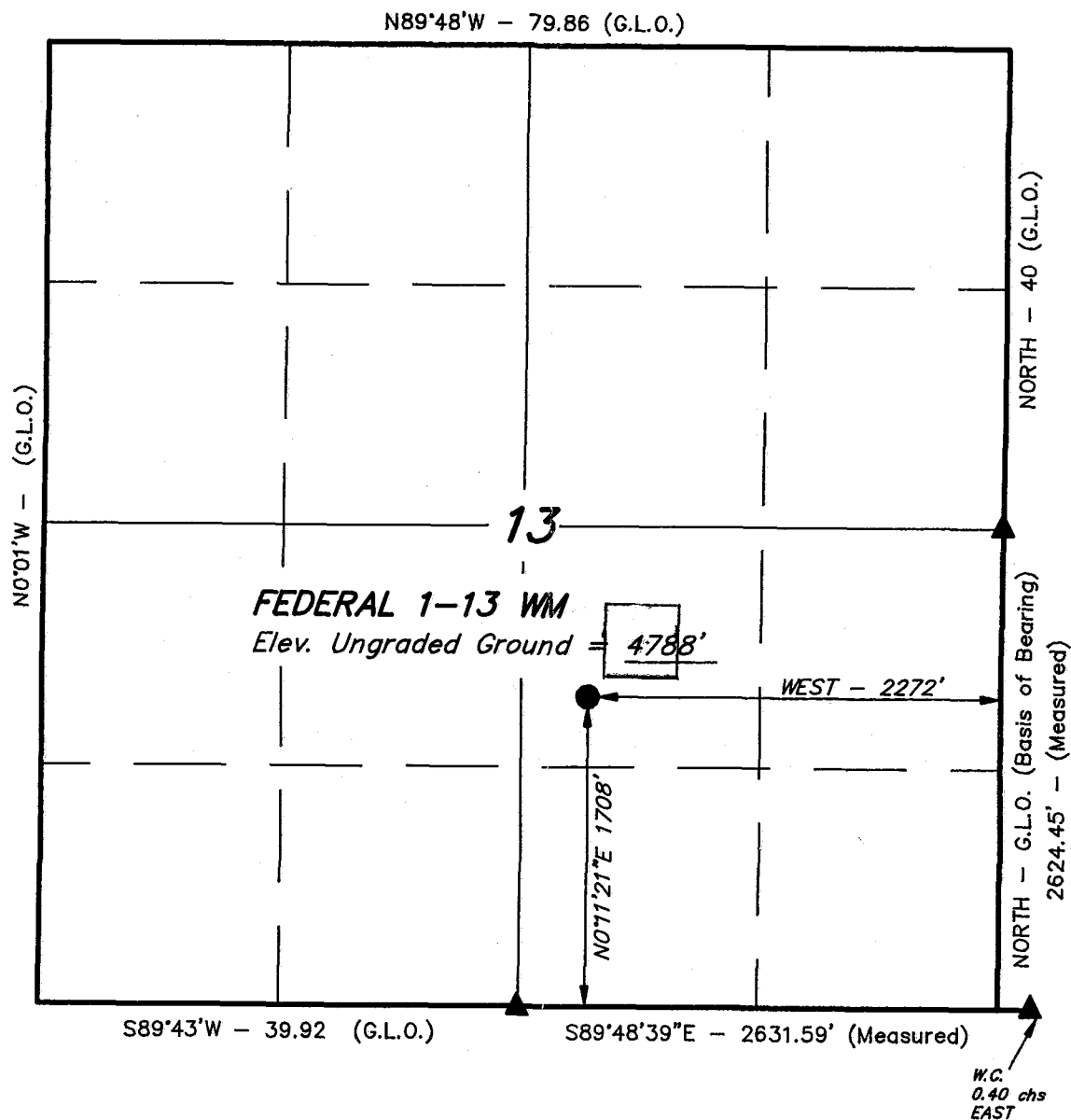
Please let us know if you find you will need any further information regarding our Application. Thank you.

Very truly yours,

Doug S. Sprague
Manager
Engineering & Operations

DSS:kr
Attachment

T25S, R20E, S.L.B.&M.



▲ = SECTION CORNERS LOCATED. (BRASS CAPS)

COORS ENERGY CO.

Well location, FEDERAL 1-13 WM, located as shown in the NW 1/4 SE 1/4 of Section 13, T25S, R20E, S.L.B.&M. Grand County, Utah.

BASIS OF ELEVATION

U.S.G.S. BENCH MARK ON A BRIDGE ABUTMENT IN THE NE 1/4 OF SECTION 19, T25S, R21E, S.L.B.&M. TAKEN FROM THE GOLD BAR CANYON QUADRANGLE, UTAH, GRAND & SAN JUAN COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON THE CAP AS BEING 4221.61'



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. Kay
REGISTERED LAND SURVEYOR
REGISTRATION NO. 5709
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX 1758 - 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 1-31-91
PARTY J.T.K. H.C. R.E.H.	REFERENCES FIELD MAP - G.L.O. PLAT
WEATHER COLD	FILE COORS ENERGY CO.



Norman H. Bangarter
Governor
Dee C. Hansen
Executive Director
Timothy H. Provan
Division Director

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE RESOURCES

Southeastern Region
455 West Railroad Avenue
Price, Utah 84501-2829
801-637-3310

RECEIVED

APR 29 1991

DIVISION OF
OIL GAS & MINING

April 25, 1991

Frank Matthews
Division Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Frank:

I am responding to a wildcat well drilling permit request on federal lease U-48755 by Coors Energy Company. This item was listed as state action UT910412-070 in the Resource Development Coordinating Committee (RDCC) agenda items. The Division of Wildlife Resources has some specific concerns with this project and its potential impacts to wildlife and wildlife habitat.

The wildcat well site is located in critical desert bighorn sheep habitat. This habitat is critical to the sheep population inhabiting Little Canyon. Desert bighorn lambing periods extend from April 1 through May 31, but disturbance in this area should be avoided until after June 15. Human activities are continuing to increase through recreation, mineral exploration and development, but these activities should be minimized during the critical lambing period to reduce impacts to desert bighorns. The necessity to improve the access road will also provide better access for recreationists and increase sheep and human conflicts. These problems must be reviewed and potential impacts evaluated, therefore I am requesting your agency require the company to provide a detailed proposal.

Impacts will be associated with short and long term activities generated by the company. Although the activities associated with just the wildcat well will most likely be for only 30 days, improving access will cause detrimental impacts to the bighorn population for as long as that access is available. The full impact of this access improvement needs to be evaluated. Even though the Bureau of Land Management (BLM) is evaluating this action, the proposed access roads are county roads. The Division of Wildlife Resources would like to work with your agency, BLM, Coors Energy and the county if they have an interest to make sure

Frank Matthews
April 25, 1991
Page 2

the responsibility for the access road does not "fall between the cracks." If this well produces, the magnitude of the impacts will increase due to the duration of activities and expected new activities.

We appreciate the opportunity to provide comments. You should direct any response you have to our requests to

Ken Phippen, Habitat Manager
Southeastern Region
455 W. Railroad Ave.
Price, UT 84501
phone 637-3310

Sincerely,

A handwritten signature in cursive script, appearing to read "Miles Moretti", with a long horizontal flourish extending to the right.

Miles Moretti

cc: Ralph Miles, DWR
Catherine Quinn, DWR
Joe Cresto, BLM
Carolyn Wright, Planning and Budget



RECEIVED

MAY 06 1991

DIVISION OF
OIL GAS & MINING

May 3, 1991

State of Utah
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
355 West North Temple
Salt Lake City, Utah 84180-1203

Gentlemen:

Attached is a copy of the approved Water Permit to include
as part of our Application to Drill the following well:

Federal 1-13WM
Section 13, T25S-R20E
Grand County, Utah

Thank you for your consideration of our APD. Let us know
if you find you will need any further information.

Very truly yours,

Karen Radcliffe
Production Secretary

KR

Attachment



Norman H. Bangerter

Governor

Dee C. Hansen

Executive Director

Robert L. Morgan

State Engineer

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

1636 West North Temple, Suite 220

Salt Lake City, Utah 84116-3156

801-538-7240

RECEIVED

MAY 06 1991

DIVISION OF
OIL GAS & MINING

April 26, 1991

Coors Energy
P.O. Box 460
Roosevelt, UT 84066

Dear Applicant:

RE: TEMPORARY APPLICATION
NUMBER 01-1080 (T65292)

Enclosed is a copy of approved Temporary Application Number 01-1080 (T65292). This is your authority to construct your works and to divert the water for the uses described.

While this approved application does give you our permission to divert and use water, it does not grant easements through public or private lands in order to gain access to the source nor to convey the water to the place of use, nor does this approval eliminate the need for such other permits as may be required by this Division or any other agency in implementing your diversion.

This application will expire April 26, 1992, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

Your contact with this office, should you need it, is with the Area Engineer, Mark Page. The telephone number is (801)637-1303.

Sincerely,

Robert L. Morgan, P.E.
State Engineer

RLM:jfb

Encl.: Copy of Approved Temporary Application

TEMPORARY

FILING FOR WATER IN THE STATE OF UTAH

RECEIVED

RECEIVED

Rec. by _____

Fee Rec. _____

APR 9 1991 Receipt # 30597

Microfilmed _____

Roll # _____

APR 11 1991

APPLICATION TO APPROPRIATE WATER

PRICE

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements to Title 73, Chapter 3 of the Utah Code Annotated (1953, as amended).

*WATER RIGHT NO. 01 - 1080*APPLICATION NO. A T652921. *PRIORITY OF RIGHT: April 9, 1991 *FILING DATE: April 9, 1991

2. OWNER INFORMATION

Name(s): Coors Energy *Interest: _____ %Address: P.O. Box 460City: Roosevelt State: Utah Zip Code: 84066Is the land owned by the applicant? Yes _____ No X (If "No", please explain in EXPLANATORY section.)3. QUANTITY OF WATER: _____ cfs and/or 10.0 ac-ft.4. SOURCE: Colorado River *DRAINAGE: _____

which is tributary to _____

which is tributary to _____

POINT(S) OF DIVERSION: _____ COUNTY: Grand
S. 1300 ft. & E. 1230 ft. from NW Cor. Sec. 26, T25S, R21E, SLB&MDescription of Diverting Works: Portable truck pump and tank trucks*COMMON DESCRIPTION: 2 miles NW of Moab Moab Quad

5. POINT(S) OF REDIVERSION

The water will be rediverted from _____ at a point: _____

Description of Diverting Works: _____

6. POINT(S) OF RETURN

The amount of water consumed will be _____ cfs or 10.0 ac-ft.

The amount of water returned will be _____ cfs or _____ ac-ft.

The water will be returned to the natural stream/source at a point(s): _____

7. STORAGE

Reservoir Name: _____ Storage Period: from _____ to _____

Capacity: _____ ac-ft. Inundated Area: _____ acres.

Height of dam: _____ feet

Legal description of inundated area by 40 acre tract(s): _____

* These items are to be completed by the Division of Water Rights

TEMPORARY

Appropriate

STATE ENGINEER'S ENDORSEMENT

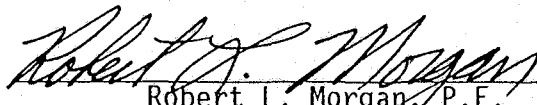
WATER RIGHT NUMBER: 01 - 1080

APPLICATION NO. T65292

1. April 9, 1991 Application received by MP.
 2. April 9, 1991 Application designated for APPROVAL by MP and KLJ.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated April 26, 1991, subject to prior rights and this application will expire on April 26, 1992.


Robert L. Morgan, P.E.
State Engineer

Bureau of Land Management
Branch of Fluid Minerals (U-922)
324 South State Street
Salt Lake City, Utah 84111-2303

June 6, 1991

Coors Energy Company
P.O. Box 467
Golden, Colorado 80402

Gentlemen:

The West Moab Valley Unit Agreement, Grand County, Utah, was approved on June 6, 1991. This agreement has been designated No. UTU67952X, and is effective as of the date of approval.

This unit provides for the drilling of one obligation well and subsequent drilling obligations pursuant to Section 9 of the unit agreement. The obligation well will be located in the SE of Section 13, Township 25 South, Range 20 East, SLB&M, Grand County, Utah and will be drilled to a depth of 7,900 feet or a depth sufficient to test through the Cane Creek zone of the Paradox Formation. No extension of time beyond December 6, 1991, will be granted to commence the "obligation well" other than "unavoidable delay" (Section 25), where justified.

Approval of this agreement does not warrant or certify that the operator thereof and other holders of operating rights hold legal or equitable title to those rights in the subject leases which are committed hereto.

Enclosed is one copy of the approved unit agreement for your records. We request that you furnish the State of Utah and all other interested principals with appropriate evidence of this approval.

Sincerely,

(Orig. Sgd.) R. A. Henricks

Robert A. Henricks
Chief, Branch of Fluid Minerals

Enclosure

bcc: Branch of Lands and Minerals Operations (U-942) w/enclosure
Division of Oil, Gas and Mining
District Manager - Moab w/enclosure
File - West Moab Valley Unit w/enclosure
Agr. Sec. Chron
Fluid Chron

U-922:TAThompson:tt:06-07-91

RECEIVED

JUN 10 1991

DIVISION OF
OIL GAS & MINING

Bureau of Land Management
Branch of Fluid Minerals (U-922)
324 South State Street
Salt Lake City, Utah 84143

June 6, 1991

Memorandum

TO: Chief, Branch of Lands and Minerals Operations, Bureau of
Land Management, Salt Lake City, Utah

FROM: Chief, Branch of Fluid Minerals, Bureau of Land
Management, Salt Lake City, Utah

SUBJECT: West Moab Valley Unit Agreement, Grand County, Utah

On June 7, 1991 the subject unit agreement was approved. This agreement has been designated No. UTU67952X and is effective as of the date of approval. A copy of the agreement is enclosed.

The basic information is as follows:

1. The area to be unitized was approved under the unit plan regulations of December 22, 1950, by Bureau of Land Management letter of February 5, 1991.
2. All formations are unitized.
3. The unit area embraces 5,707.55 acres, more or less, of which 4,998.21 acres (87.57 percent) are Federal lands and 709.34 acres (12.43 percent) are State lands.

The following leases embrace lands included within the unit area:

U-48754	U-48756	U-54052
U-48755	*U-51245	*U-61354

* Indicates lease to be considered for segregation by the Bureau of Land Management pursuant to Section 18 (g) of the unit agreement and Public Law 86-705.

All lands and interests are fully committed except Tract 7 totalling 709.34 acres (12.43 percent) which are not committed. Also, certain overriding royalty interest owners have not signed the unit agreement. All parties owning interests within this unit area were invited to join the unit agreement.

4. The obligation well will be located in the SE of Section 13, Township 25 South, Range 20 East, SLB&M, Grand County, Utah and will be drilled to a depth of 7,900 feet or a depth sufficient to test through the Cane Creek zone of the Paradox Formation.

In view of the foregoing commitment status, effective control of operations within the unit area is assured. We are of the opinion that the agreement is necessary and advisable in the public interest and for the purpose of more properly conserving natural resources. Approval-Certification-Determination, signed by the State Land Board for the State of Utah, is attached to the enclosed agreement.

(Orig. Sgd.) R. A. Henricks

Enclosure

bcc: Operator (Courtesy Copy)
Division of Oil, Gas and Mining
District Manager - Moab w/enclosure
MMS - Reference Data Branch
File - West Moab Valley Unit w/enclosure
Agr. Sec. Chron
Fluid Chron

U-922:TAThompson:tt:06-07-91

STATE ACTIONS

Mail to:
RDCC Coordinator
116 State Capitol
Salt Lake City, Utah 84114

1. ADMINISTERING STATE AGENCY
OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
2. STATE APPLICATION IDENTIFIER NUMBER:
(assigned by State Clearinghouse)
3. APPROXIMATE DATE PROJECT WILL START:
June, 1991
4. AREAWIDE CLEARING HOUSE(S) RECEIVING STATE ACTIONS:
(to be sent out by agency in block 1)
Southeastern Utah Association of Governments
5. TYPE OF ACTION: ☐ Lease ☒ Permit ☐ License ☐ Land Acquisition
☐ Land Sale ☐ Land Exchange ☐ Other
6. TITLE OF PROPOSED ACTION:
Application for Permit to Drill
7. DESCRIPTION:
Coors Energy Company proposes to drill a wildcat well, the 1-13WM on federal lease U-48755 in Grand County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The U.S Bureau of Land Management is the primary administrative agency in this action and must issue approval before operations commence.
8. LAND AFFECTED (site location map required) (indicate county)
NW/4, SE/4, Section 13, Township 25 South, Range 20 East, Grand County, Utah
9. HAS THE LOCAL GOVERNMENT(S) BEEN CONTACTED?
Unknown
10. POSSIBLE SIGNIFICANT IMPACTS LIKELY TO OCCUR:
No significant impacts are likely to occur.
11. NAME AND PHONE NUMBER OF DISTRICT REPRESENTATIVE FROM YOUR AGENCY NEAR PROJECT SITE, IF APPLICABLE:
12. FOR FURTHER INFORMATION, CONTACT: Frank R. Matthews
PHONE: 538-5340
13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL
DATE: 4-5-91 Petroleum Engineer

WOI187



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

June 26, 1991

Coors Energy Company
P. O. Box 467
Golden, Colorado 80402

Gentlemen:

Re: Federal 1-13WM Well, 1708 feet from the South line, 2272 feet from the East line,
NW SE, Section 13, Township 25 South, Range 20 East, Grand County, Utah

Approval to drill the referenced well is hereby granted in accordance with Utah Code Ann. Section 40-6-18, et seq. (1953, as amended), and Utah Admin. R.615-2-3, subject to the following stipulations:

1. Special attention is directed to compliance with Utah Admin. R.615-3-3I, which prescribes drilling procedures for designated potash areas.
2. Pressure control equipment nipped up on 9-5/8" casing will be 5000 psi. equipment.
3. Special attention is directed to mitigating the potential impacts to wildlife and wildlife habitats, particularly the desert bighorn sheep.

In addition, the following actions are necessary to fully comply with this approval:

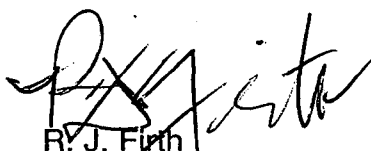
1. Spudding notification within 24 hours after drilling operations commence.
2. Submittal of Entity Action Form 6, within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.
3. Submittal of the Report of Water Encountered During Drilling, Form 7.

Page 2
Coors Energy Company
Federal 1-13WM
June 26, 1991

4. Prompt notification in the event it is necessary to plug and abandon the well. Notify R. J. Firth, Associate Director, (Office) (801) 538-5340, (Home) 571-6068, or J. L. Thompson, Lead Inspector, (Home) 298-9318.
5. Compliance with the requirements of Utah Admin. R.615-3-20, Gas Flaring or Venting.
6. Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of Drinking Water/Sanitation, telephone (801) 538-6159.
7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-019-31321.

Sincerely,



R. J. Firth
Associate Director, Oil & Gas

tas
Enclosures
cc: Bureau of Land Management
J. L. Thompson
we14/1-16

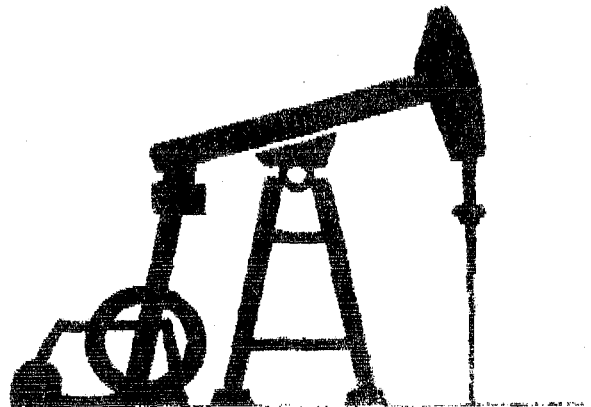
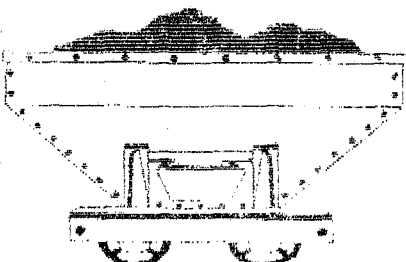
**RECEIVED**

JUN 26 1991

DIVISION OF
OIL GAS & MINING*255 20K*
Sec. 13
*43-019-31321***TRANSMITTAL COVER SHEET**DATE 6/26/91 PAGE 1 OF 3 (INCLUDING COVER PAGE)TO: Frank Matthews FROM: Doug SpragueAdditional Information _____

Telecopier Number (303) 279-6087

Verification Number (303) 278-7030



FED. 1-13WM
BLOWOUT PREVENTION EQUIPMENT

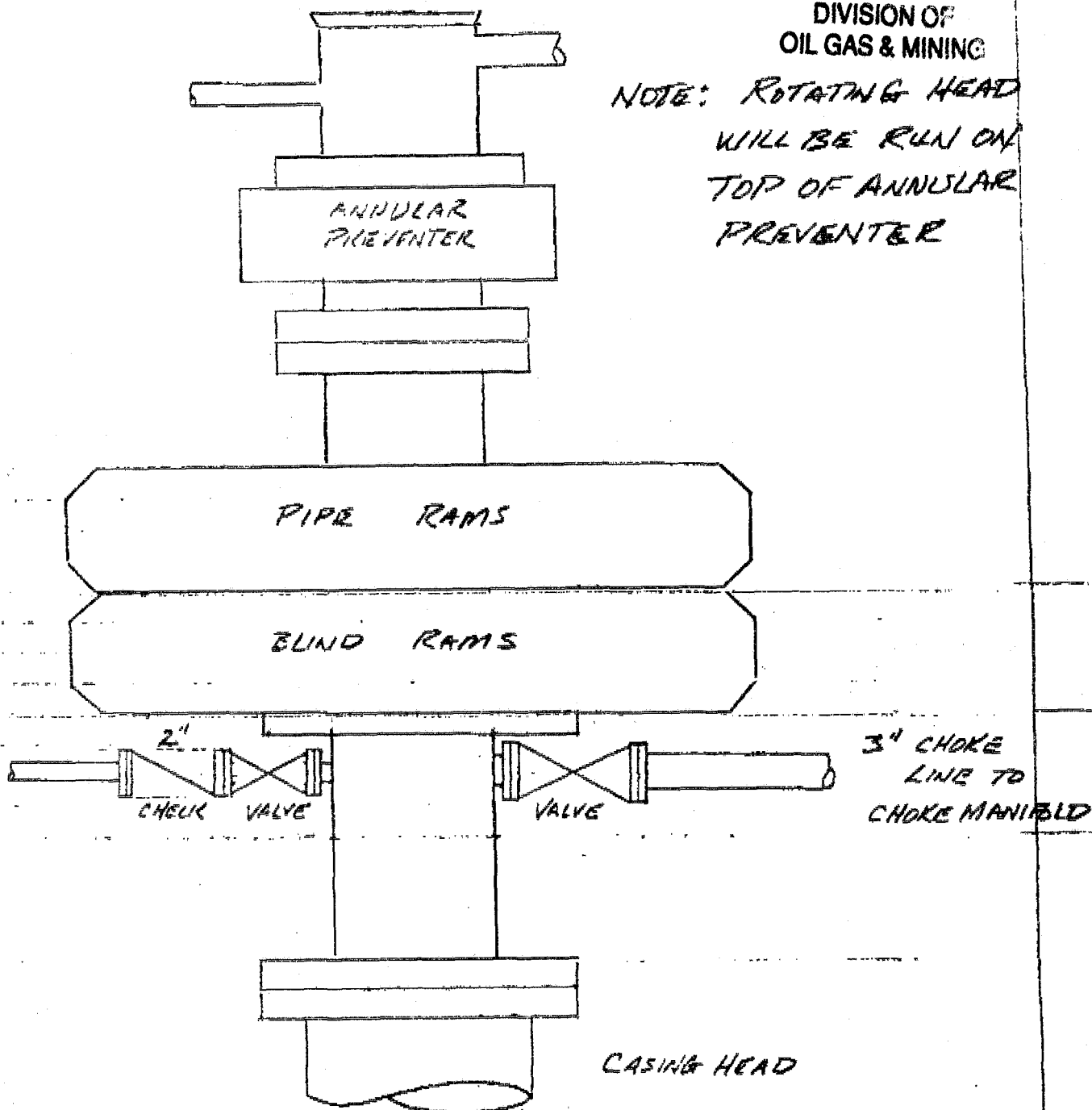
RECEIVED

JUN 26 1991

5000 PSI W.P.

DIVISION OF
OIL GAS & MINING

NOTE: ROTATING HEAD
WILL BE RUN ON
TOP OF ANNULAR
PREVENTER



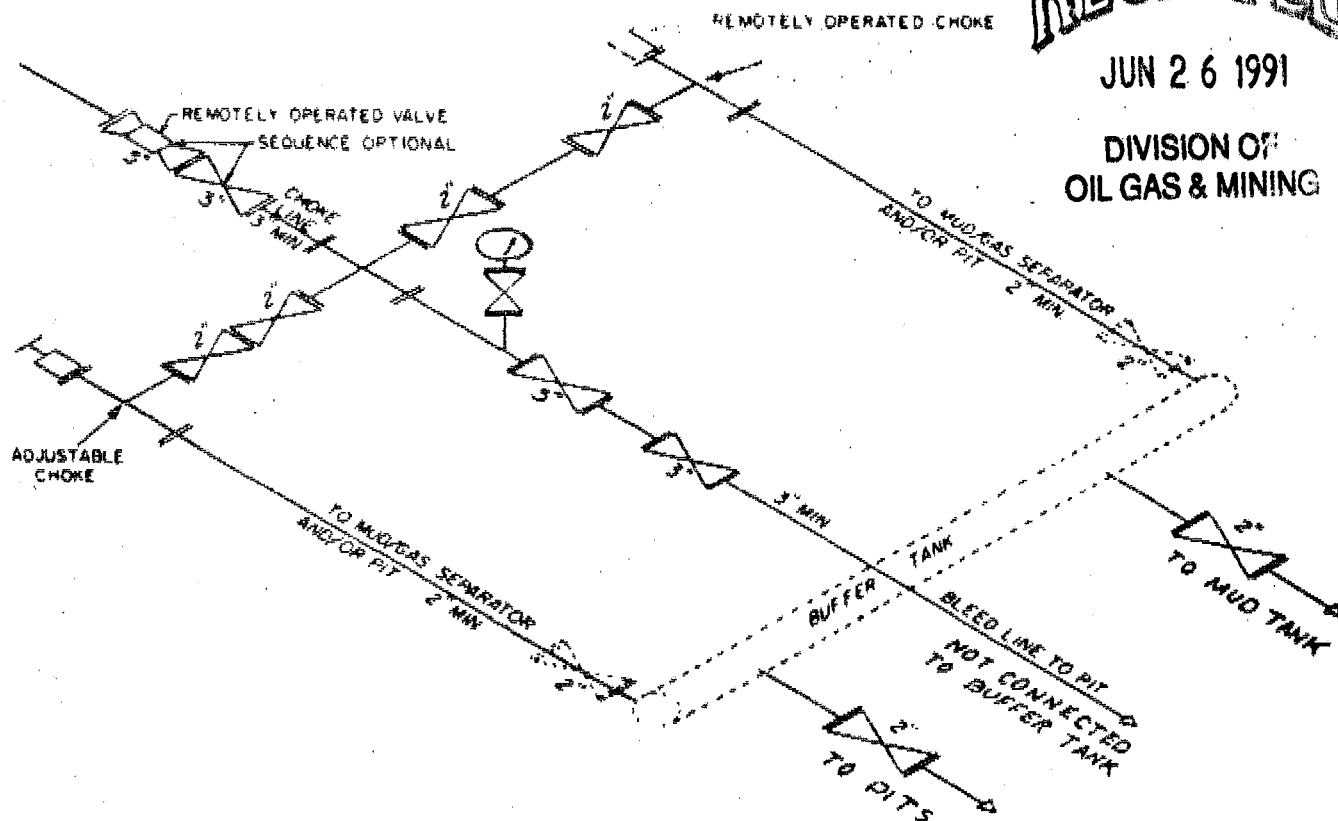
1. ANNULAR PREVENTER

2. DOUBLE RAM, PIPE AND BLIND RAMS WITH 2 SIDE
OUTLETS FOR KILL AND CHOKER LINES, ALTERNATIVE
WOULD BE TO USE DRILLING SPOOL WITH 2 SIDE
OUTLETS.

EXHIBIT "G"

RECEIVED

JUN 26 1991

DIVISION OF
OIL GAS & MINING**5M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION MAY VARY**

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, or 15M drawings, it would also be applicable to those situations.

[FR Doc. 88-28738 Filed 11-17-88; 8:45 am]

BILLING CODE 4310-84-C

COORS ENERGY CORP.

RECEIVED

FED 1-13WM
DIVERTEK SYSTEM
FOR AIR DRILLING TO 3500' ±

JUN 26 1991

DIVISION OF
OIL GAS & MINING

BELL
NIPPLE

ROTATING
HEAD
2000 PSI

BLOOD LINE

ANNULAR BOP
2000 PSI OR GREATER

13⁵/₈" x 13³/₈" CSG HEAD
WITH 2 LPO'S

13³/₈" SURFACE CSG

22-141 50 SHEETS
22-142 100 SHEETS
22-143 200 SHEETS



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Coors Energy Company

3. ADDRESS OF OPERATOR

PO Box 467, Golden, Colorado 80402

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements*)

At surface

1708' FSL, 2272' FEL, NW/SE

At proposed prod. zone

same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE

approx. 7 miles SW of Moab/32.3 miles by road

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

1708'

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT.

None

16. NO. OF ACRES IN LEASE

2,556.64

17. NO. OF ACRES ASSIGNED

TO THIS WELL

40

19. PROPOSED DEPTH

7500'

20. ROTARY OR CABLE TOOLS

rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

4788' GL

22. APPROX. DATE WORK WILL START*

June, 1991

23.

Type:

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"K55 STC	54.50#	350'	300 sks.
12-1/4"	9-5/8"K55 STC	36.00#	2950'	500 sks.
7-7/8"	5-1/2"K55 LTC	15.50#	7500'	To be designed

17.00# N80 LTC & 20.000# S95 LTC

See attached Multipoint Surface Use Plan and Drilling Program
for details.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

D.S. Sprague

TITLE

Manager/Engineering/
Operations

DATE

3-29-91

(This space for Federal or State office use)

PERMIT NO.

Assistant District Manager
for Minerals

APPROVED BY

William C. Hanger

TITLE

DATE

6/25/91

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

FLARING OR VENTING OF
GAS IS SUBJECT TO NTL 4-A

*See Instructions On Reverse Side

T25S, R20E, S.L.B.&M.

COORS ENERGY CO.

Well location, FEDERAL 1-13 WM, located as shown in the NW 1/4 SE 1/4 of Section 13, T25S, R20E, S.L.B.&M. Grand County, Utah.

BASIS OF ELEVATION

U.S.G.S. BENCH MARK ON A BRIDGE ABUTMENT IN THE NE 1/4 OF SECTION 19, T25S, R21E, S.L.B.&M. TAKEN FROM THE GOLD BAR CANYON QUADRANGLE, UTAH, GRAND & SAN JUAN COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON THE CAP AS BEING 4221.61'

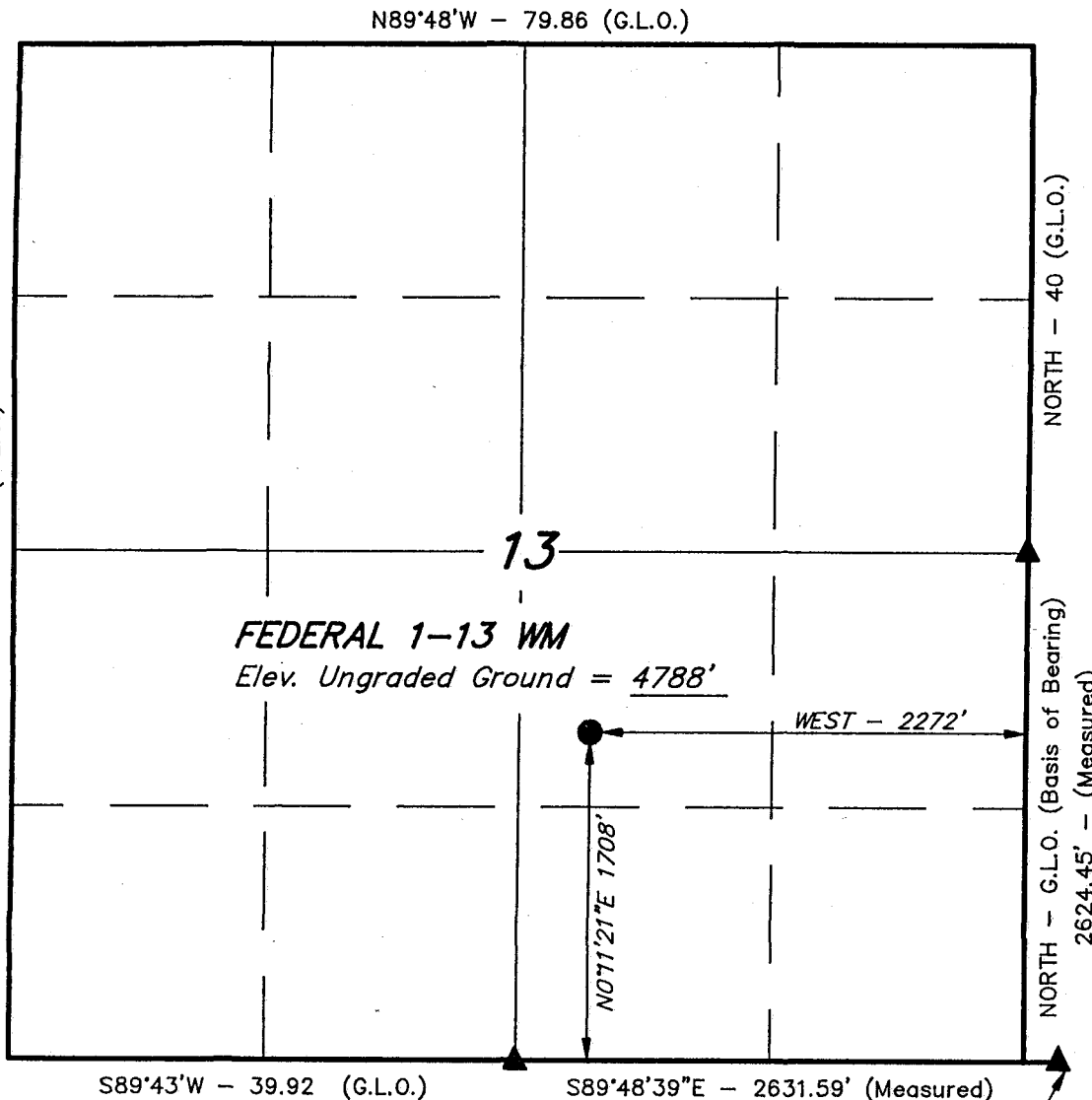


EXHIBIT "A"

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. Kay
REGISTERED LAND SURVEYOR
REGISTRATION NO. 5709
STATE OF UTAH



▲ = SECTION CORNERS LOCATED. (BRASS CAPS)

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX 1758 - 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 1-31-91
PARTY J.T.K. H.C. R.E.H.	REFERENCES FIELD MAP - G.L.O. PLAT
WEATHER COLD	FILE COORS ENERGY CO.

Coors Energy Company
Well No. Federal 1-13WM
NWSE Sec. 13, T. 25 S., R. 20 E.
Grand County, Utah
Lease U-48755

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Coors Energy Company is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by C0019 (Principal - Adolph Coors Co. - Subsidiary - Coors Energy Co.) via surety consent as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

A. DRILLING PROGRAM

All lease operations will be conducted in full compliance with applicable regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1 and Onshore Oil and Gas Order No. 2 and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions and the approved plan will be made available to the field representative to insure compliance.

1. Prior to drilling out of the surface casing shoe, a 2000psi BOP system shall be in place, functional and tested. According to Onshore Order No. 2 an annular preventer and choke manifold system will satisfy this request.
2. As discussed between Doug Sprague, Coors Energy Company, and Dale Manchester, BLM, Moab District Office, pressure control equipment will be upgraded to 5000 psi system prior to drilling through the 9 5/8" intermediate shoe at 2950'. This equipment shall be in place, functional, and tested as per Onshore Order No. 2 prior to drilling out of the intermediate shoe.
3. Also as discussed between Mr. Sprague and Mr. Manchester, intermediate casing would be set into the first clastic zone within the Paradox Formation. This zone could range between 2950 and 3500 feet.
4. If it is decided that 5 1/2" casing (production casing) will be set, cement shall be circulated to 100 feet or into the next clastic zone above the abnormal pressure zone.

Surface casing and intermediate casing shall have a centralizer on each of the bottom three joints.

Daily drilling and completion progress reports shall be submitted to the District Office on a weekly basis.

Required verbal notifications are summarized in Table 1, attached. Written notification in form of a Sundry Notice (Form 3160-5) will be submitted to the District Office within twenty-four (24) hours after spudding. If the spudding occurs on a weekend or holiday, the written report will be submitted on the following regular work day.

No hexavalent chromate additives will be used the mud system.

CONDITIONS OF APPROVAL

EA Log No.	<u>UT-068-91-032</u>	Lease or Serial No.	<u>U-48755</u>
Project	<u>Application to drill for oil (Coors Energy Well No. Fed. 1-13 WM)</u>		
		Project	
Applicant	<u>Coors Energy Company</u>	Location	<u>T.25S., R.20E, sec.13</u>
Address	<u>Golden, Colorado</u>	County	<u>Grand</u> , Utah
BLM Office	<u>Grand Resource Area</u>	Phone No.	<u>(801) 259-8193</u>

County Road # 21 receives a high level of recreational use by both vehicle and mountain bike visitors. Therefore, the operator/contractor and their respective employees will observe a maximum speed of 30 miles/hour in order to provide for public safety. Warning signs will be placed at blind corners and other areas of limited visibility. These measures will be required during all phases of activity.

Construction

1. The operator/contractor will contact the Grand Resource Area Office in Moab, Utah ((801) 259-8193) 48 hours prior to beginning work on public lands.
2. The dirt contractor will be furnished an approved copy of the surface use plan and BLM stipulations prior to starting any work.
3. Surface disturbance and vehicular travel will be limited to the approved location and access route. Any additional area needed will require BLM approval in advance of use.
4. Access (ingress and egress) will be controlled by appropriate signs as needed along the road.
5. The access road and well pad will be sprinkled with water as needed to control dust.
6. Neither construction material nor equipment will be stored on the access road or location without prior BLM approval.

Drilling

1. The preferred drilling medium for the first 2900 feet is gel-lined mud or foam. If technically impossible, air drilling will be permitted with prior BLM approval.
2. A dewatering unit will be used, if available, and the reserve pit will be reduced in size.
3. In order to reduce fugitive dust, the operator/contractor will be required to periodically water down the access road and drill pad.

Post-Drilling

1. If the well is a producer, a monitoring study on the desert bighorn sheep will be initiated. A memorandum of understanding, including Coors, the Utah Division of Wildlife Resources and the Bureau of Land Management, will be established to identify the study method, goals, duration and funding.
2. Immediately upon completion of drilling, the location and surrounding area will be cleared of all debris resulting from the operation. All trash will be disposed of in the trash pit/cage. Non-burnable debris will be hauled to a local dump site.
3. The operator/contractor will contact the BLM Grand Resource Area office in Moab, Utah (801-259-8193) 48 hours prior to starting rehabilitation work that involves earthmoving equipment and completion of restoration measures.
4. Before any dirt work to restore the location takes place, the reserve pit liner and contents will be removed from the location to an approved disposal site.
5. All disturbed areas will be recontoured to blend as nearly as possible with the surrounding area.
6. The stockpiled topsoil will be evenly distributed over the disturbed area.
7. All disturbed areas will be scarified with the contour to depth of 4 inches. Do not smooth pads out, leave a roughened surface.
8. Seed will be drilled at a time to be specified by the BLM with the seed mixture in Part 10 of the Multi-Point surface use plan.
9. The access between Grand County Road # 21 and the well location will be blocked to prevent access to vehicles or other uses.
10. Waterbars will be used on all sloping surfaces as shown below:

GRADE
2%
2-4%
4-5%
+5%

SPACING
200 ft.
100 ft.
75 ft.
50 ft.

11. The re-seeded location will be fenced to allow for successful rehabilitation.

12. If the well is not a producer, those segments of County Road # 21 requiring upgrading will be restored to their prior condition, as provided for in the Memorandum of Agreement between the Bureau of Land Management and the Grand County Commission (6/21/91).

C. SURFACE USE PLAN

1. All site security guidelines identified in 43 CFR 3162.7-5 and ONSHORE OIL AND GAS ORDER NO. 3; SITE SECURITY will be adhered to.
2. Gas measurement will be conducted in accordance with the ONSHORE ORDER NO. 5; GAS MEASUREMENT and 43 CFR 3162.7-3.
3. Oil measurement will be conducted in accordance with ONSHORE OIL AND GAS ORDER NO. 4; OIL MEASUREMENT as of the effective date of August 23, 1989 and 43 CFR 3162.7-2.
4. Pipeline construction activity is not authorized under this permit.
5. The dirt contractor will be provided with an approved copy of the surface use plan of operations.
6. This permit will be valid for a period of one (1) year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.
7. Copies of all water analysis required by the State of Utah in relation to surface discharge of produced water will be submitted to the Moab District Office, Bureau of Land Management.
8. Plans will be formulated for long term monitoring of aquifers and springs in the area of proposed development prior to approval of further Applications for Permit to Drill

NOTIFICATIONS

Notify Elmer Duncan of the Grand Resource Area, at
(801) 259-8193 for the following:

2 days prior to commencement of dirt work, construction or reclamation;

1 day prior to spudding;

50 feet prior to reaching surface casing depth;

3 hours prior to testing BOP's and surface casing, and intermediate casing.

If the person at the above number cannot be reached, then notify Fred Onyear in the Moab District Office at (801) 259-6111 or at home (801) 259-5937 (If unsuccessful, then notify one of the following people listed below).

~~Notify the Moab District Office, Branch of Fluid Minerals at (801) 259-6111 for the following:~~

No well abandonment operations will be commenced without the prior approval of the Assistant District Manager, Minerals Division. In the case of newly drilled dry holes, and in emergency situations, verbal approval can be obtained by calling the following individuals, in the order listed.

Dale Manchester, Petroleum Engineer	Office Phone: (801) 259-6111
	Home Phone: (801) 259-6239
Eric Jones, Petroleum Engineer	Office Phone: (801) 259-6111
	Home Phone: (801) 259-2214

If unable to reach the above individuals including weekends, holidays, or after hours please call the following:

Lynn Jackson,	Office Phone: (801) 259-6111
Chief, Branch of Fluid Minerals	Home Phone: (801) 259-7990

24 HOURS ADVANCE NOTICE IS REQUIRED FOR ALL ABANDONMENTS

DECISION RECORD AND
FINDING OF NO SIGNIFICANT IMPACT

EA Log No.	<u>UT-068-91-032</u>	Lease or Serial No.	<u>U-48755</u>
Project	<u>Application to drill for oil (Coors Energy Well No. Fed. 1-13 Wm)</u>	Project	
Applicant	<u>Coors Energy Company (Coors)</u>	Location	<u>T.25S., R.20E, sec.13</u>
Address	<u>Golden, Colorado</u>	County	<u>Grand</u> , Utah
BLM Office	<u>Grand Resource Area</u>	Phone No.	<u>(801) 259-8193</u>

DECISION RECORD

Decision: The following is the decision of the Bureau.

To approve the Application for Permit to Drill (APD) subject to the terms and provisions of the lease and the Conditions of Approval referenced below.

Rationale:

After careful review of the written comments provided by two government entities, two environmental groups, two biking groups, and six individuals, we have reviewed and refined environmental assessment (EA) UT-068-91-032 in an attempt to address those concerns where applicable. Twelve issues were identified warranting further consideration. Our response is found in Appendix 7 and appropriate changes were incorporated into the body of the report.

In addition, because so many of the concerns or issues focused on the upgrading of County Road # 21, BLM and the Grand County Commission have entered into a Memorandum of Agreement (MOA) that provides for restoration of County Road # 21 to its current condition (6/21/91) if the Coors well is not a producer. If production is established, the road would be maintained at the minimum level necessary to allow for transportation of the product until an alternative method (i.e. pipeline) can be employed. This partnership agreement has been entered into to help reduce the possible long-term impacts identified in the EA with respect to the bighorn sheep herd.

The Application for Permit to Drill, the MOA, and the attached Conditions of Approval, based on mitigation proposed in the environmental assessment, will prevent significant impacts to the environment. The APD is in conformance with management actions provided for in the Grand Resource Area Resource Management Plan (RMP) and consistent with BLM objectives of 43 CFR 3160 and National Minerals Management Policy.


District Manager

6/25/91
Date

CONDITIONS OF APPROVAL

This decision incorporates by reference the attached conditions of approval. The conditions of approval have been developed to mitigate adverse environmental impacts which may result from the action permitted by this decision.

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the accompanying environmental assessment, referenced above, I have determined that impacts are not expected to be significant. Therefore an environmental impact statement is not required.


Area Manager

5/20/91
Date

UT-060-1790-2
July 1986
(Wang 135b 6/91)

CONDITIONS OF APPROVAL

EA Log No.	<u>UT-068-91-032</u>	Lease or Serial No.	<u>U-48755</u>
Project	<u>Application to drill for oil (Coors Energy Well No. Fed. 1-13 WM)</u>		
		Project	
Applicant	<u>Coors Energy Company</u>	Location	<u>T.25S., R.20E, sec.13</u>
Address	<u>Golden, Colorado</u>	County	<u>Grand</u> , Utah
BLM Office	<u>Grand Resource Area</u>	Phone No.	<u>(801) 259-8193</u>

County Road # 21 receives a high level of recreational use by both vehicle and mountain bike visitors. Therefore, the operator/contractor and their respective employees will observe a maximum speed of 30 miles/hour in order to provide for public safety. Warning signs will be placed at blind corners and other areas of limited visibility. These measures will be required during all phases of activity.

Construction

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Post-Drilling

1. If the well is a producer, a monitoring study on the desert bighorn sheep will be initiated. A memorandum of understanding, including Coors, the Utah Division of Wildlife Resources and the Bureau of Land Management, will be established to identify the study method, goals, duration and funding.
2. Immediately upon completion of drilling, the location and surrounding area will be cleared of all debris resulting from the operation. All trash will be disposed of in the trash pit/cage. Non-burnable debris will be hauled to a local dump site.
3. The operator/contractor will contact the BLM Grand Resource Area office in Moab, Utah (801-259-8193) 48 hours prior to starting rehabilitation work that involves earthmoving equipment and completion of restoration measures.
4. Before any dirt work to restore the location takes place, the reserve pit liner and contents will be removed from the location to an approved disposal site.
5. All disturbed areas will be recontoured to blend as nearly as possible with the surrounding area.
6. The stockpiled topsoil will be evenly distributed over the disturbed area.
7. All disturbed areas will be scarified with the contour to depth of 4 inches. Do not smooth pads out, leave a roughened surface.
8. Seed will be drilled at a time to be specified by the BLM with the seed mixture in Part 10 of the Multi-Point surface use plan.
9. The access between Grand County Road # 21 and the well location will be blocked to prevent access to vehicles or other uses.
10. Waterbars will be used on all sloping surfaces as shown below:

GRADE
2%
2-4%
4-5%
+5%

SPACING
200 ft.
100 ft.
75 ft.
50 ft.

11. The re-seeded location will be fenced to allow for successful rehabilitation.
12. If the well is not a producer, those segments of County Road # 21 requiring upgrading will be restored to their prior condition, as provided for in the Memorandum of Agreement between the Bureau of Land Management and the Grand County Commission (6/21/91).

UT-060-1790-3
July 1986 (0063-1)

INTRODUCTION

The Bureau of Land Management (BLM), Grand Resource Area received an Application for Permit to Drill (APD) on oil and gas lease U-48755 from Coors Energy Company (Coors) of Golden, Colorado. The 10-year lease was issued on October 1, 1981 by the BLM subject to provisions of the lease, and regulations in 43 CFR 3160, BLM Onshore Order No. 1, 1983, and other appropriate Orders and Notices to Lessees (NTL). The lessee was given the right to explore for and develop oil and gas resources underlying the leased lands.

This environmental assessment tiers to the Grand Resource Area Resource Management Plan which directs decision making for the affected area, and to the Environmental Analysis Record (EAR) for Proposed Oil and Gas Leasing in the Grand Resource Area (1976) and the RMP Supplemental Environmental Assessment #UT-060-89-025 (12/88), on file at the Grand Resource Area Office, which documents in greater detail the impacts to the resources affected by the proposed action.

This environmental assessment (EA) addresses the impacts from drilling one well and does not address production or any of the support facilities needed should the well go into production. Cumulative impacts have been addressed in the above documents.

NEED FOR THE PROPOSED ACTION

This action is needed to insure consistency with the United States Government's domestic energy and land-use policies in addition to recognizing legal rights of the lessee which can be exercised in a reasonable manner.

The proposed APD is a method whereby the lessee would be allowed to exercise rights granted within the lease to explore for and possibly develop oil and gas resources underlying the leased lands.

PROPOSED ACTION AND ALTERNATIVES

PROPOSED ACTION

Coors submitted an Application for Permit to Drill (APD), 8-point drilling plan and 13-point surface use plan to the BLM with the intention of drilling an exploratory well (Federal 1-13WM) in Sec. 13, T.25S., R.20E. (see Maps 1 and 2). The proposed well would be located on oil and gas lease U-48755. The 8-point drilling plan and the 13-point surface use plan include standardized stipulations, regulations, and policy which are part of every APD package. These contain measures that provide mitigation for many of the impacts that can be expected to occur from access and location preparation, drilling, and rehabilitation and will not be addressed further in this EA, unless noted otherwise. These documents may be found in oil and gas well file Coors 1-13WM.

Pre-Drilling

Initial construction is proposed to commence on June 25, 1991. Approximately two acres would be disturbed in developing the well pad and reserve pit, covering an area of 215' by 325' (see Appendix 2). Plant material and topsoil would be removed and preserved for future reclamation. Beginning excavation would be done with a dozer and finish work with a motor grader.

The proposed access route, as identified in the APD, leaves U.S. Highway 191 (US-191) on State Route 313, follows SR-313 for 12.6 miles to Grand County Class B Road # 21, and follows the county road for 10.6 miles to the well location turnoff. Approximately 8 miles of county road, between SR-313 and the Bull Canyon Road junction, would need very limited improvement. Approximately 300 feet of road surface, where sandstone rock is exposed, would be padded by pulling clay-bearing soils from the borrow ditches on each side. Borrow ditches would be cleaned to improve water control, and the travel surface would be smoothed to facilitate travel. One existing cattle guard would be cleaned and/or ditched for water control. The existing road would not be widened.

There are 2.6 miles of existing Grand County Road #21 between the Bull Canyon Road junction and the well access road in Little Canyon. Within this portion of the road, there would be segments requiring up-grading. Along one segment, the sandstone surface would be ripped and 300 feet of roadway would be re-aligned, deviating approximately 25 feet north from the existing road. This would provide for installation of a 24-foot wide cattle guard in an existing pasture division fence in the NESE of Sec. 26, T.25S., R.20E. The old roadbed would be closed to travel over this segment. Along some of the remaining segments, water control borrow ditches would be cleaned and the travel surface would be padded with existing soils. Approximately 0.4 mile would be widened 2 feet in Little Canyon to allow for an 18-foot wide travel surface through the sandy areas. Some turn-outs along the road would be constructed for the safety of bike riders and for vehicles to pass safely. At least 4 culverts would be installed in the major drainage channels that cross this section of the road.

Grand County Road # 21 has been acknowledged by the BLM as having been constructed under the provisions of Revised Statute 2477 (RS 2477), which provided for the construction of public highways over public land. A public highway under this statute is defined as a definite route or way that is freely open for all to use for the type of use intended. Reasonable activities within the RS 2477 right-of-way are within the jurisdiction of the holder. These include, but are not necessarily limited to, maintenance, reconstruction, upgrading, and the like. Under RS 2477 BLM has no authority to review and/or approve such reasonable activities.

The road is on Grand County's Class B road system. The State provides funds for annual maintenance of the system. The Utah Department of Transportation requires that Class "B" roads be maintained in such a manner that they can be negotiated by two wheel drive vehicles during dry weather.

A temporary road, approximately 0.3 mile long, would be constructed from the county road to the well location in Little Canyon. Approximately 500 feet of this road would be through an area of prior mining disturbance. The proposed travel width is 16 feet.

To allow for a longer turning radius, to accomodate larger vehicles, a directional sign at the southern entrance to Little Canyon would be moved off the road. Four warning signs, to alert motorists and bicyclists of the drilling operation, would be placed on the county road: one just off SR-313, one just off US-191, one at the Bull Canyon Road junction, and one at the cattleguard where the dugway road leaves Little Canyon.

The construction of the well pad, and upgrading of Grand County Road #21 would be accomplished during the same week. They would use two semitrucks to haul two dozers and two motor graders to the different areas. During the week there would also be at least two pickups making a round trip to the working area each day. At the close of the week semitrucks would be brought in to haul two dozers and two motor graders from the area.

A watering truck would be used for dust suppression during construction and drilling. City of Moab water would be used for this as contracted by the operator. Colorado River water would not be used for this project.

Drilling

The drilling phase is expected to begin one week after construction begins. It would take approximately 24 semitruck trips to haul the drilling rig to the location (6 trucks, 4 trips each). The drilling rig would stand 132 feet tall and be located on the well pad. The duration of drilling operations for this well would be approximately 45 days, around the clock. There could be at least ten cars or pickups driven to the well location each 24 hour period to haul the workers to the rig. The same number of vehicles used during rig-up would be used for de-rigging and material removal. An average of 3 to 5, as needed, supply trucks are expected to service the operation each week.

For down-hole drilling, assuming everything goes according to schedule with no down-hole problems, the company proposes to use air foam mist or gel-lined mud for the first 350 feet (approx. 1 day); air mist or foam from 350 to 2900 feet (approx. 5-7 days); and saturated mud below 2900 feet (until completion of the project).

Coors would use City of Moab water as the primary water source for the drilling of the Federal 1-13W1. The majority of water used in drilling would be saturated brine water from brine sources.

Generator-driven lights would be used for the safety of the workers, especially during the dark hours. Standard safety regulations require some visible lighting at the tower top. The rest of the tower lights would have a half shield over fluorescent globes to direct the lighting to the lower working areas. Exhaust mufflers would be installed on each large motor to reduce the noise level.

Three self-contained camp trailers would be placed on location for the tool pusher, mud logger and consultant. Waste products from the trailers would go into a holding tank and the contents disposed of in an approved disposal site.

Post-Drilling

At the completion of the well drilling, all saltwater left in the pit would be trucked to an approved disposal site. The reserve pit would be fenced on four sides and the solids would be dried on location. The pit would be monitored for dryness of the mud, which is expected to take from 6 months to 1 year. When the mud is dry, the reserve pit would be reclaimed by pulling in the edges of the liner, covering the pit with stockpiled material and reseeding.

If the prospect is successful, stockpiled topsoils would be scattered over the non-productive portion of the drilling pad, that portion of the pad contoured, ripped and seeded. If unsuccessful, the stockpiled topsoil would be scattered as evenly as possible over the entire pad, the pad contoured, ripped and seeded. The stockpiled brush and trees would be scattered over the pad to stabilize the soils, hold moisture and enhance seed germination. For a producing well, additional environmental documentation would be required.

ALTERNATIVES

Alternative 1

An alternative route to be considered for access to the Coors location is an existing road that is part of Grand County road # 21. The route leaves US-191 and goes up a dugway into Little Canyon (see Map # 3). The distance is approximately 2.7 miles. The road presently is visible from the highway for the short distance where the road leaves US-191 and goes through Section 11 prior to reaching the west rim of Moab Canyon.

If this road were used as the primary access to the well site, the county would require upgrading to meet county safety standards. Approximately 80% of the 2.7 miles would require reconstruction. The existing maximum grade of 16% would be reduced to 8-12% by cutting and filling construction, maintaining bank slopes of 1/4:1. For a distance of two miles, the travel surface would be widened from an average of 12 feet to a maximum of 18 feet with some wider pullout areas constructed, in the steeper sections of the road, for the safety of travelers. Upgrading the road would involve use of heavy equipment and/or blasting, with appropriate safety measures taken. Approximately 14 points that jut out from the canyon rim would be removed. At least 7 culverts would be installed to control drainage along the road. The existing cattle guard on the road, where the road enters Little Canyon, would be replaced with a stronger one to support heavier vehicles.

Alternatives Considered but Rejected

Background

The Delhi-Taylor oil well drilled on the valley floor (T. 25 S., R. 21 E., Section 18, NWSW) had positive oil showing. The Delhi-Taylor well is located immediately east of US-191. A well drilled 900 feet SE of this location in 1983 was dry. This has established the Delhi-Taylor as the easternmost point of the target. In order to further test this structure for the presence of hydrocarbons, Coors has proposed to drill an exploratory well, to be located in T.25S., R.20E., SLM. Section 13, NWSE.

Well Location Alternatives

Alternatives to the proposed location were considered to the east (Coors preferred location), west, north, and south. Each alternative is rejected because:

Topographic Constraints

- (1) a location to the east below the canyon wall along US-191 on the west side of the good show of oil found while drilling the Delhi-Taylor oil well. The relatively flat area west of US-191, in a direct line between the Delhi-Taylor and this site, is between 450 and 550 feet in width. Within this area there is a railroad (200 foot-wide R/W), one 345 kV powerline and one 138 kV powerline (combined R/W width of 160 feet), and two major (26" and 24") buried pipelines. There are severe restrictions for activities above the pipelines. There is new State law for working near overhead powerlines. Any activities would need to meet national electric code requirements, State law and OSHA requirements. It is unlikely that a 132-foot drill rig, which would be considerably taller than the powerlines, could be accommodated in this corridor.
- (2) a location west of this site would place the drilling location off the desired target, according to confidential company data. This location would increase the distance from the Delhi-Taylor oil well, thus decreasing the likelihood of encountering the desired target.
- (3) moving the well north or south of this site is not feasible due to rough topography consisting of steep cliffs, sandstone rims and ledges. As in alternative 2, either of these locations would further distance drilling operations from the Delhi-Taylor oil well and possibly diminish the opportunity for a successful project.

Technical Constraint

- (1) Directional drilling through an expected 4,700 feet of salt is not practical nor technologically feasible for this wild cat well. The severity of the problems associated with directional drilling is vastly reduced with vertical drilling.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

VEGETATION AND SOIL

Affected Environment

The proposed well site is within the saltbrush vegetative community. Rainfall is approximately 8 to 10 inches per year. Available soil moisture is the overriding limiting factor in this vegetative zone. Since most of the annual precipitation occurs during fall through spring, the most active period of growth is spring.

Climax species include shadscale, greasewood, blackbrush, fourwing saltbush, nuttall saltbush, mat saltbush, galleta grass, blue grama grass, Indian ricegrass, and salina wildrye.

A portion of the proposed access road via SR-313 is within the pinyon-juniper vegetative zone. The climax community dominants are pinyon, juniper, Mormon tea, black sagebrush, Indian ricegrass, galleta grass, and glue grama.

The area is identified as a Moenkopi-Rock outcrop complex in the 1989 issue of "Soil Survey of Grand County, Utah", Soil Conservation Service. The soils are a fine sandy loam, very shallow and well-drained. Permeability of the Moenkopi soil is moderately rapid, runoff is medium, and water erosion hazard is moderate. The hazard of soil blowing is moderate.

Impacts of the Proposed Action

Approximately 13,360 cubic yards of soils and attendant vegetation would be constructed into a drilling production pad (see Appendix 2). Less than 2 acres of vegetation would be disturbed at the pad and less than one acre for road upgrading. Top soils would be replaced during abandonment procedures, which may be as soon as 90 days or as late as ten years.

Mitigation

The reseeded location should be fenced to allow successful rehabilitation and to prevent livestock from reaching the area. Seeding is determined to be successful when a suitable plant cover or density provides for site stabilization and a vegetative trend has been established comparable to the surrounding area.

Residual Impacts

Two to three acres would be out of production for up to 10-15 years.

Impacts of Alternative 1

The impacts from the pad construction would be the same as the proposed action. Less vegetation would be disturbed because of the shorter access route and the lower vegetation density.

Mitigation

Same as the proposed action.

Residual Impacts

Two to 2 1/2 acres would be out of production for up to 10-15 years.

RECREATION

Affected Environment

The proposed well is adjacent to the Little Canyon road, which is part of the Gemini Bridges trail used for mountain biking and off-highway vehicle tours. The trail is promoted by BLM and Grand County Travel Council for these uses. During the April through June use period it is common to have up to a hundred users on this trail per day. On high-use weekends, such as Easter and Memorial Day, use on the trail may be twice this amount. A second use period of October and November also has considerable use, but diminished from the spring season. During the summer season, mountain bike use drops off substantially and jeeping use occurs at a lower level than in the spring and fall. Estimated summer use is 20 persons per day on the trail. The Little Canyon area is a popular camping area during spring and fall. Summer camping use is low.

The proposed access to the well is along 12.6 miles of SR-313 and 8 miles of the Gemini Bridges trail. SR-313 is access to Island In the Sky District of Canyonlands National Park and Deadhorse Point State Park. In 1990 the Island In the Sky District had 151,900 visits and Deadhorse Point State Park recorded 119,600 visits. The main visitation season for the parks is April through October.

Impacts of the Proposed Action

The presence of drilling facilities would change the "roaded natural" setting of Little Canyon in the vicinity of the well to a "rural" setting (BLM Recreation Opportunity Spectrum scale of primitive, semi-primitive, roaded natural, rural, modern urban; see Appendix 4). This would in turn detract from the recreation experience of those seeking the undeveloped landscape. The noise and lights from the drilling activity would have a negative impact on those recreationists who camp within a couple miles of the well site and some users would be displaced by the activity. Use of air drilling for over a week would result in clouds of dust in Little Canyon and the surrounding area which would detract from users' outdoor experience.

Increased traffic on the Gemini Bridges trail from the drilling activity may pose an increased safety hazard to other users. On SR-313 this increased traffic would not pose a safety hazard due to the high design standards of the road, including a bike lane. The 8 miles of graded dirt road (County Road # 21 from SR-313) has several blind corners and hills. The additional truck traffic would encounter slow-moving bikers and vehicles and accidents could result. The current general

traffic flow is recreational with some commercial. The proposed project would change the mix of recreational/commercial traffic by increasing commercial vehicles.

Portions of the proposed access road would be upgraded to accomodate the truck traffic. This would change the character of the 2 miles of road where the upgrading would occur from a "jeeping trail" to a graded dirt road, which is not inconsistent with other sections of the road.

Mitigation

To reduce the impacts to recreationists the activity should be scheduled outside the high-use season, recreationists should be informed of the activity, the speed of the vehicles should be limited, and the number of vehicles should be kept to the minimum necessary. By restoring the 2.6 miles of upgraded road to its "jeeping trail" character, this impact would be mitigated.

To reduce airborne dust, no air drilling should be permitted. A gel-lined mud would be preferred.

Residual Impacts

Users would experience short-term inconveniences from noise, lights and traffic control during road construction and drilling.

The safety hazard to recreationist would be reduced but would still remain.

The mix of traffic would be decreased recreational and increased commercial.

Impacts of Alternative 1

The impacts would be the same as the proposed action except the drilling traffic would encounter recreationists for 2.7 miles up the dugway instead of 8 miles and there would be no increased traffic on SR-313. There would still be a safety hazard to recreationists using the Gemini Bridges Trail. The "jeeping trail" character of the Gemini Bridges Trail would not change on the 2.6 miles of upgrade in the proposed action but would change for the 2.7 miles of upgrade on the dugway.

Mitigation

Mitigating measures would be the same as under the proposed action.

Residual Impacts

Residual impacts would be the same as under the proposed action.

VISUAL RESOURCES

Affected Environment

The proposed action is in an area that has been identified as having a Class II management class rating. Management activities within a class II area should not be evident in the characteristic landscape or in the basic elements of line, form, color, and texture. Contrasts may be seen, but must not attract attention. This area is of level B scenic quality which indicates that although much of the scenery is typical of the physiographic region there are many outstanding features in the area. This area is heavily used by mountain bikers, 4x4 enthusiasts, and for general recreation during the Easter to Thanksgiving period. The area is near Arches and Canyonlands National Parks and Dead Horse Point State Park, all of which are popular attractions. Much of this use is attracted to the area by the high visual quality and lack of man-made intrusions.

Impacts of the Proposed Action

The visual impact of the pad is caused by the loss of vegetative cover within the disturbed area, exposing the underlying red colors. The most obvious visual obtrusions would be the tanks and other structures to be located on the site during the exploration. These features would be highly visible within the five mile visibility zone shown on the 30' viewshed map. The access road from the county road to the well pad would also be visible although not obtrusive within this setting provided that it is aligned on grade and does not involve cuts and fills, shoulders and drainage ditches. The drilling rig would be a temporary dominant feature when viewed from within the seen areas within Little Canyon.

Within the 2.6 miles of County Road # 21 proposed for upgrading there is one section that involves changes in road alignment. This work would increase the visual intrusion of the road into the natural landscape. However there are numerous other roads in the area and this intrusion would be a minimal impact to the area. Any surface disturbing activity that removes the vegetation from the site would be apparent and an adverse impact to the viewshed.

If the well is unproductive, the presence of a fenced reserve pit for 6 months to one year would be visually intrusive in an otherwise reclaimed area.

Mitigation

Surface-disturbing activities should be kept to a minimum, including driving of vehicles and equipment off established roads. Cuts and fills should be kept to a minimum and the edges, created by these cuts and fills, should be feathered to prevent the appearance of sharp edges that are a contrast to the environment. Disturbed areas should be restored and reseeded as soon as possible. Structures to remain on site during the exploration period could be painted in colors determined during the on-site inspection to blend into the background. Structures that cannot be painted and are a visual obtrusion, and vehicles should be located in such a way

as to not be dominant in the views identified within Little Canyon. Drilling mud should be removed from the reserve pit, including the liner, and hauled to an approved disposal site. The reserve pit should be reclaimed as soon as possible after the well has been determined to be non-productive.

Residual Impacts

The appearance of the drill rig and the numerous structures associated with the exploration effort is not consistent with the visual management rating of Class II. This activity is of short duration and takes place during a time period when there is a limited number of people in the area. It would be a visual obtrusion but there is no opportunity to move the site or conceal it. This activity would take place during a low-use recreation period. The activity would not downgrade the VRM class due to its temporary nature.

Impacts of Alternative 1

The impact of the well pad and associated structures would be the same as the proposed action. This alternative looks at upgrading the lower dugway road to provide access to the site. This analysis looked at the road upgrading as a long-term activity. This existing road is in an area with a high absorption capability due to the diversity along the hillside. Currently there are several mining sites and road cuts along the hillside that are not apparent to those viewing the hillside from U.S. 191. The area is a large boulder-covered slope with disperse vegetation. The road roughly follows the exposed bedding planes along the hillside further blending into the natural scenery. The upper section of the road is steep and runs through a highly-eroded area with gullies and columns making it difficult to see the road from US-191. The level of improvement necessary to meet county safety standards would increase the visibility of the road in the landscape. However, most of the areas needing culverts, changes in grade, and widening are along the upper section of the road, an area that has the greatest potential for visual absorption due to the large boulders and diversity in topography. Changing the grade and widening the road would not dramatically change the overall appearance of the area and would be an acceptable management activity within the Class II rating for this site.

Impacts of the Alternative

Widening the road may increase the appearance of the road in the landscape and the increased use of this road would increase the overall visual impact when viewed from US-191. Any structures placed along the sides of the road, such as guardrail and reflectors would further increase the negative impact of the road on the landscape.

Mitigation

By minimizing the amount of material pushed over the down slope side of the road and locating signs and reflectors in areas that are not visible when looked at from US-191 or SR-313 it should be possible to conduct this activity within the management objectives of the Class II rating.

Residual Impacts

The amount of traffic that would be using this road, both in association with the exploration well and the increased use by the public as a result of improving the road, would continue to be a visual intrusion by creating more roads and undeveloped camping sites in the area.

WILDLIFE/RIPARIAN/ENDANGERED PLANT AND ANIMAL SPECIES

Affected Environment

The desert bighorn sheep is a major wildlife species in this area. Utah Division of Wildlife Resources (UDWR), Canyonlands National Park (Larry Thomas), and the Grand Resource Management Plan, 1985, estimate that 400 animals inhabit the Potash and Canyonlands area. BLM and the National Park each manage habitat for approximately 200 animals. Herd unit boundaries are delineated for administrative purposes (hunting units) and do not always correctly depict an animal's habitat. Much of the 200,000 acres within the BLM's portion of the Potash Herd Unit are not areas which are preferred by bighorn. These areas are open flats, containing no escape cover, or pinyon-juniper forests, which bighorn are usually reluctant to penetrate very deeply because visibility and sometimes escape cover is lacking. The habitat type preferred by bighorn is the steep rough terrain with good visibility (talus slopes) and the flatter valley floors with rough terrain or escape cover nearby. UDWR calculated that there are 38,000 acres of bighorn habitat within the herd unit. These areas are critical because they comprise only 20% of the acreage within the Potash Herd Unit. UDWR believes that Little Canyon and the surrounding area (approximately 1,665 acres or approximately 4% of the 38,000 acres which bighorn prefer to occupy) serve as a focal point from which the herd is currently expanding (see Map # 3). The fact that this is an expanding population places an even higher value on the animals currently inhabiting Little Canyon and the surrounding area. This area includes north/south trending talus slopes along Moab Canyon determined to be directly influenced by the proposed action.

This bighorn sheep herd which includes those within the Canyonlands National Park (Island in the Sky) is the only remaining native desert bighorn herd in Utah supporting viable populations. A bighorn herd of approximately 100 animals (100 + or - 20%) with normal sex and age structure is considered to be a viable population (Geist 1975; Weaver 1986; Brussard 1986; Marcot et al. 1986; Berger 1990).

The Potash bighorn sheep herd is very important for several reasons. As mentioned, it is the last native viable population remaining in Utah. Other desert bighorn herds in Utah, either do not support numbers large enough to be considered viable populations or they have been reintroduced into historical ranges which they had once occupied.

The Potash bighorn herd has remained healthy, disease-free and is expanding both its range within the unit and its population size. The herd is being used as a source for reestablishing bighorn populations in other historically occupied ranges.

A limited number of hunting permits has been issued for several years, including a high bid permit which is sold for a minimum of \$20,000. The herd is also used non-consumptively by those who enjoy watching and photographing wildlife.

The area affected by the proposed action also provides habitat for mule deer and a variety of birds, mammals and reptiles. The mule deer population is small. Less than 100 animals inhabit the entire Potash Herd Unit.

There are no riparian areas or endangered plant or animal species at the proposed well site or along the proposed access route to the well site.

Impacts of the Proposed Action

Species and related habitats that would be affected by the proposed action include mule deer, desert bighorn sheep, small mammals and reptiles.

The upgrading of the last 2.6 miles of access road from SR-313 may have long-term impacts on wildlife, primarily desert bighorn sheep. The road improvement is expected to attract more people to the back country by allowing quick and easy access which may result in long-term habitat degradation and fragmentation.

King 1984, studied desert bighorn sheep responses to human contact in Red Canyon and White Canyon in southeastern Utah. Trials involved approaching bighorn by foot and vehicle until the animals became aware of the intrusion and quantifying the responses. The Red Canyon bighorn, whose habitat had exposed them to high disturbance levels, showed a higher degree of single animal and group wariness than the White Canyon bighorn whose habitat had low disturbance levels (see Appendix 6). It is anticipated that bighorn within the project area would respond similarly to increased traffic, noise and human contacts as Red Canyon bighorn responded in the study cited.

Utah Division of Wildlife Resources (UDWR) has based population density on critical as well as lower valued habitat. Within each area, bighorn densities will vary and the critical habitat will contain higher densities. With density levels of 4.5 bighorn per square mile (used as a means to quantify impacts), 12 animals (100%) may be expected to abandon the impact area for 1 to 2 months due to non-stop noise and increased traffic. Eventhough the construction and drilling would take place after the majority of the bighorn lambing has occurred, it would take place along their major travel corridor. Any direct losses or abandonment would be difficult to tie to this project due to the high recreational use in the area.

The mobile animals, such as deer and bighorn, would avoid collisions with traffic on the access road. Eventhough upgraded, the road is not expected to be a high speed road due to the roughness of the terrain. Some small mammals and reptiles could be killed by vehicles.

Deer would be disturbed and temporarily displaced by the access road and drill site activities. However, because of the low density of deer in the area and the short duration of work activities, they should not suffer any long-term negative affects by this proposal.

Mitigation

If development continues, a monitoring study may be necessary to assess the impacts on use and migration patterns in the affected area.

Residual Impacts

Small mammals and reptiles could be killed by vehicles.

Improved road access may attract more people by allowing quick and easy access resulting in long-term habitat degradation and fragmentation.

A short-term displacement of up to 12 bighorn may occur from the drilling operation. If losses occur, it would be difficult to define what losses are attributable to the operation.

Impacts of Alternative 1

The upgrading of 2.7 miles of access road from U.S. 191 into the well site would have long-term impacts on bighorn sheep. Both the road construction and the additional traffic that the improved road would encourage could interrupt a major travel corridor both north and south along the talus slope. This route falls entirely within the area of greatest concern for the expansion of the herd in high-value bighorn sheep habitat.

Impacts from the well construction and drilling would be the same as under the proposed action.

Mitigation

Same as the proposed action.

Residual Impacts

Confining the improved access totally within the area of greatest concern could have a detrimental effect on the existing population and could reduce the potential for bighorn sheep expansion into the surrounding habitat.

CULTURAL RESOURCES

Affected Environment

The exploration site was surveyed by Julie Howard, Grand Resource Area Archaeologist, BLM. No sites were identified on the proposed location and access roads.

Impacts of the Proposed Action

Unidentified cultural resources at depth may be impacted.

Mitigation

None.

Residual Impacts

None.

Impacts of Alternative 1

Unidentified cultural resources at depth may be impacted.

Mitigation

None.

Residual Impacts

None.

CUMULATIVE IMPACTS

While the drilling rigs are being hauled into the respective locations or are being hauled out, heavy truck traffic can be expected on County Road # 21 and SR-313. As more wells are approved and drilled, there may be some overlap in setup and de-rigging operations resulting in a possible cumulative impact on SR-313. Currently, the Columbia 19-1 well is in the process of being drilled. Drilling is expected to last approximately 35 to 40 days. If the Coors location is approved, construction and drilling are expected to start immediately and take approximately 45 days to complete. There may be some overlap as the 19-1 well and the proposed Coors well are being de-rigged and rigged, respectively.

The Little Canyon area is currently a high-use recreation area and contains important habitat for bighorn sheep. As visitor use and oil and gas activity increase, the cumulative effect of people using this area is expected to adversely impact the bighorn sheep population. Upgrading County Road # 21 is expected to expedite the impacts on the herd. It is not possible to quantify the effects of recreation or drilling of the well solely, but both activities are contributing to possible fragmentation of the herd.

INDIVIDUALS AND AGENCIES CONSULTED

The following persons and agencies were consulted in the preparation of this EA.

Utah Division of Wildlife Resources
Southern Utah Wilderness Alliance
State Historic Preservation Office
Grand County Road Supervisor
Coors Energy Company
Utah Power and Light Company

The availability of this EA was announced in the EA bulletin board on May 20, 1991 and in the local newspaper, The Times-Independent on May 16, 1991. Comments were accepted through June 4, 1991. A copy of the EA was provided to 22 individuals and organizations.

Written comments were received from the following:

Southern Utah Wilderness Alliance
State of Utah Div. of Wildlife Resources
Kathy Aldous
Utah Chapter Sierra Club
National Park Service
Jack Campbell
Nichols Expeditions
Utah Mountain Bike Association
Mary Moran
David Williams
Bill Turk
Mark Doherty

Issues identified by the public during the public comment period and the BLM responses to these issues are in Appendix 7.

LIST OF PREPARERS

Brad Palmer, Grand Resource Area, Area Manager
Elmer Duncan, Grand Resource Area, Minerals Staff
Jeff Robbins, Grand Resource Area, Minerals Staff
Sal Venticinque, Grand Resource Area, Geologist
Lindell Greer, Grand Resource Area, Realty Specialist
Mary von Koch, Grand Resource Area, Realty Specialist
Alex VanHemert, Grand Resource Area, Recreation Specialist
Julie Howard, Grand Resource Area, Archaeologist
Joe Cresto, Grand Resource Area, Wildlife Specialist
Raymon Carling, Grand Resource Area, Range Conservationist
Lynn Jackson, MDO, Chief, Fluids/Minerals
Daryl Trotter, MDO, Environmental Planner
Mike O'Donnell, MDO, Landscape Architect
Lee Chamberlain, MDO, Chief, Branch of Tech. Support & Assistance
Ruth Thurston, MDO, Writer/Editor

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Berger, J. 1990. Persistence of Different-sized Populations: An Empirical Assessment of Rapid Extinctions in Bighorn Sheep. Conservation Biology Vol. 4: No.1. Pages 91-98.

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Moen, A.N. 1981. The biology and management of wild ruminants. Part III. Cornerbrook Press, Lansing, N.Y.

Weaver, R. 1986. Personal communications. Mr. Weaver indicated that all the desert bighorn ranges in the California Desert that were originally estimated to have less than 80 animals, no longer supported bighorn populations. The original estimates were made in the late 1950s and early 1960s. Grand Resource Area, Resource Management Plan

Grand Resource Area Environmental Impact Statement
BLM SVIM Soils Survey Data
RMP Supplemental Environmental Assessment
Soil Conservation Service, Soil Survey of Grand County, Utah, 1989

APPENDIXES

1. Site pictures
2. Pit and pad layout
3. Surface Use Plan
4. Recreation Opportunity Spectrum
5. VRM checklists and narrative
6. Excerpts from bighorn sheep harassment study
7. Public comments and BLM responses

MAPS

1. General location
2. Proposed access route and well location
3. Alternative access and Area of concern for bighorn habitat

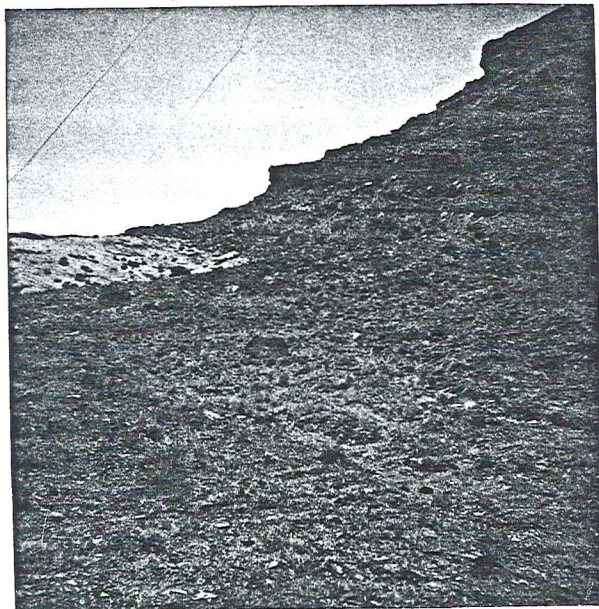
Environmental Impacts:

<u>Critical Element</u>	<u>Affected</u>		<u>Date</u>
	<u>Yes</u>	<u>No</u>	
Air Quality	---	<u>me</u>	<u>2/10/91</u>
T & E Plants	---	<u>me</u>	<u>2/10/91</u>
Floodplains	---	<u>me</u>	<u>2/10/91</u>
Farmlands	---	<u>me</u>	<u>2/10/91</u>
Water Quality	---	<u>me</u>	<u>2/10/91</u>
Cultural (surface)	---	<u>JA</u>	<u>2-21-91</u>
Paleontology	---	<u>JA</u>	<u>2-21-91</u>
T & E Animals	---	<u>JA</u>	<u>2-8-91</u>
Wetlands/Riparian	---	<u>JA</u>	<u>2-8-91</u>
ACECs	---	<u>Avit</u>	<u>2-8-91</u>
Wilderness	---	<u>Avit</u>	<u>2-8-91</u>
Wild & Scenic Rivers	---	<u>Avit</u>	<u>2-8-91</u>
V R M	<u>Avit</u>	---	<u>2-8-91</u>
Waste Hazardous/Solid	---	<u>R</u>	<u>5-17-91</u>

APPENDIX 1

COORS PROPOSED WELL LOCATION #1-13 WM
NE/SE Sec 13, T25S, R20E

Well Pad

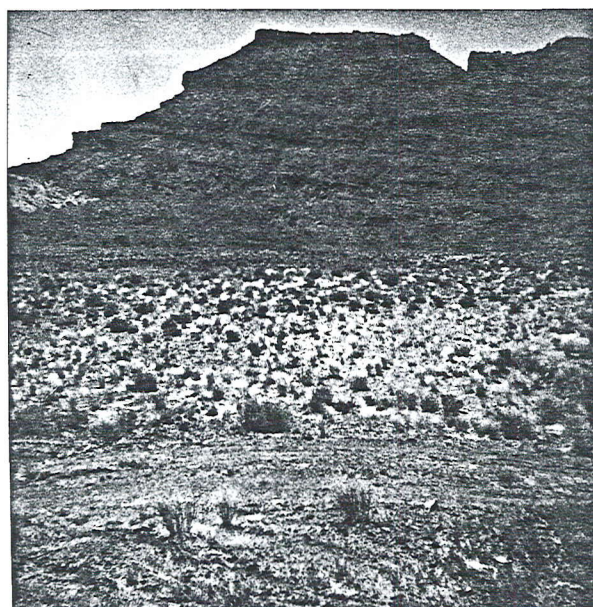


Looking southerly along east side of well pad.



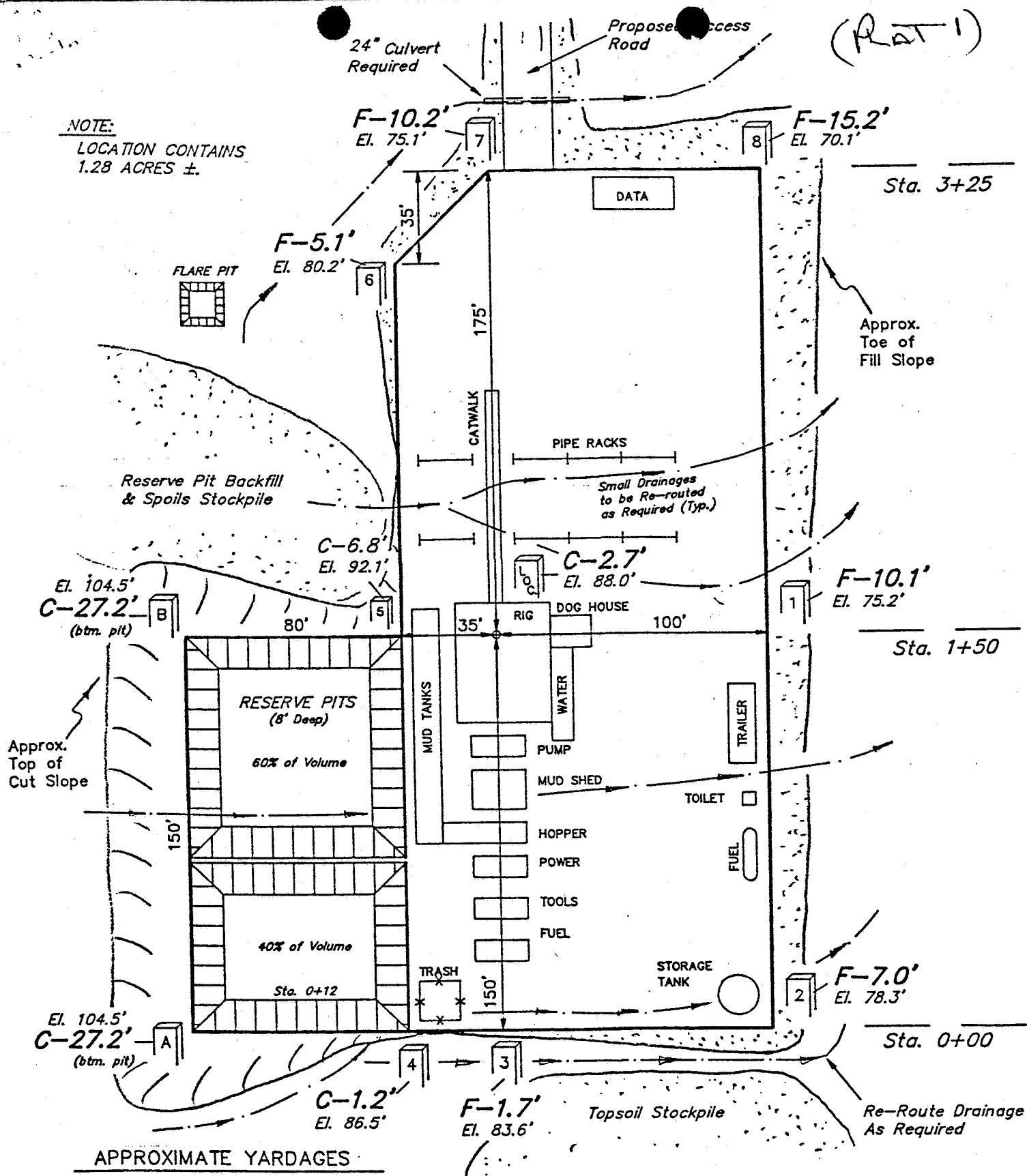
Looking southerly along west side of well pad.

Proposed New Access



Looking southerly from Grand County
Class B road #21

APPENDIX 2



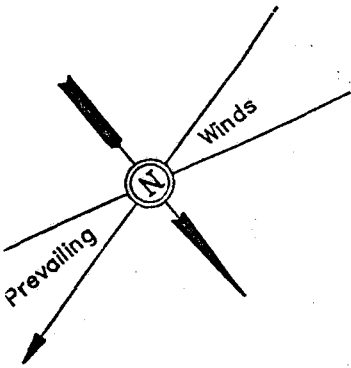
(6") Topsoil Stripping = 1,030 Cu. Yds.
Pit Volume (Below Grade) = 2,520 Cu. Yds.
Remaining Location = 9,810 Cu. Yds.

TOTAL CUT = 13,360 CU.YDS.

FILL = 10,420 CU.YDS.

EXCESS MATERIAL AFTER
5% COMPACTION = 2,390 Cu. Yds.
Topsoil & Pit Backfill
(1/2 Pit Vol.) = 2,290 Cu. Yds.
EXCESS UNBALANCE
(After Rehabilitation) = 100 Cu. Yds.

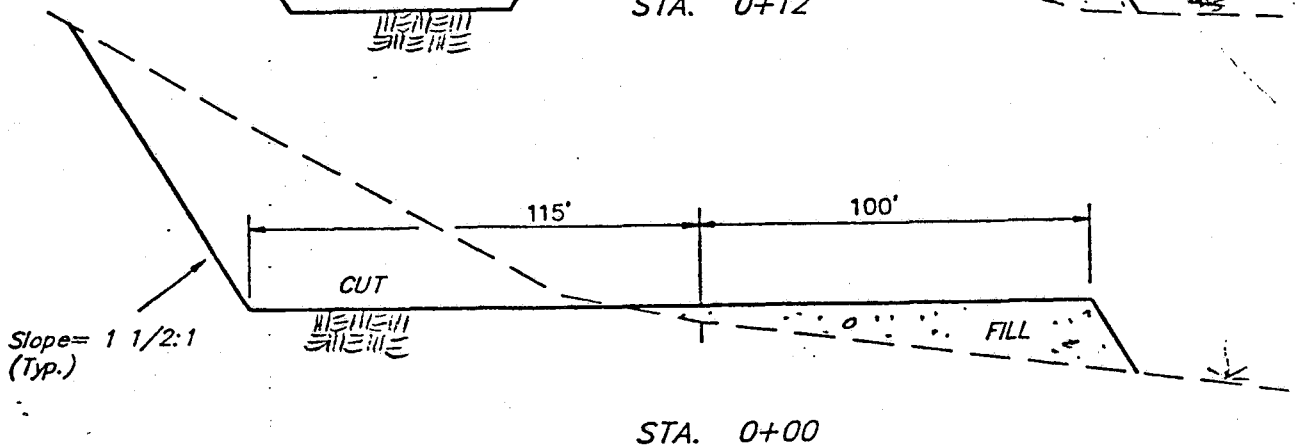
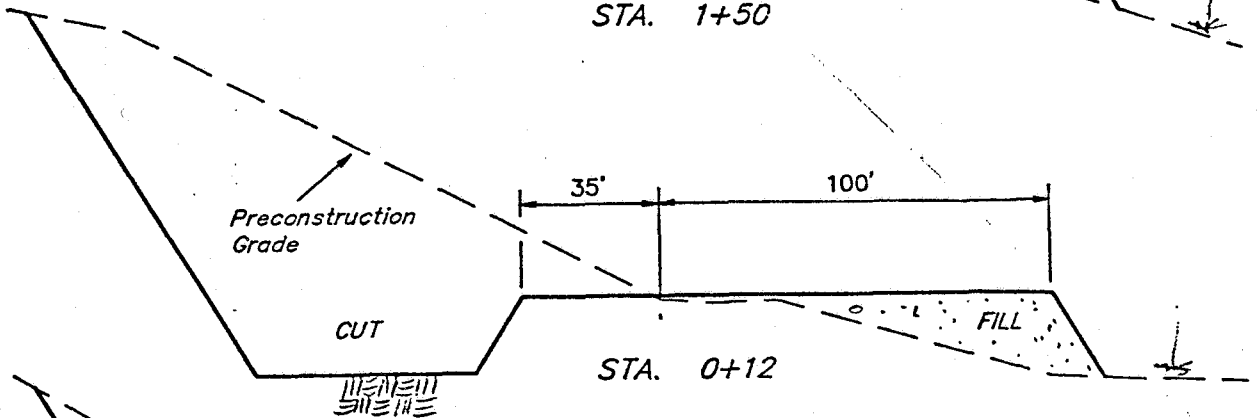
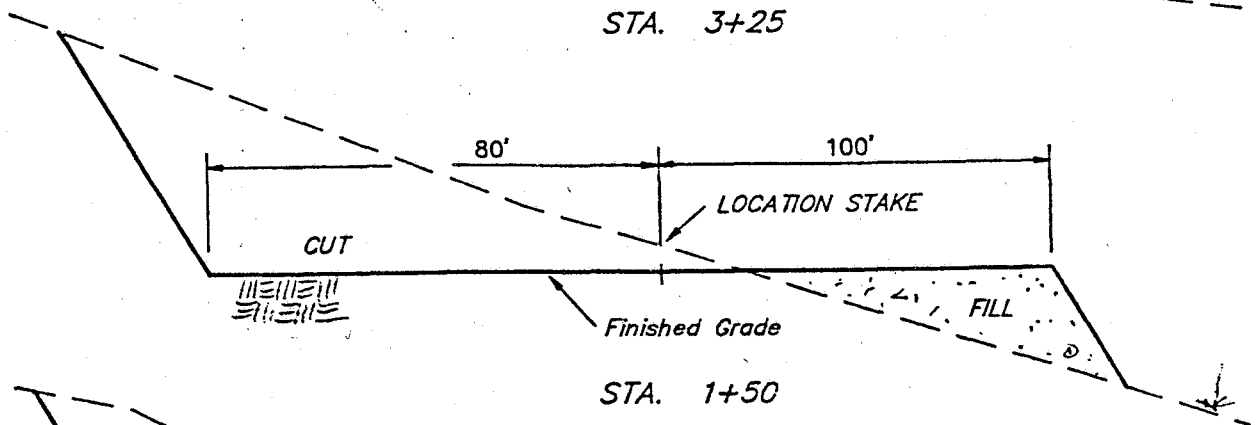
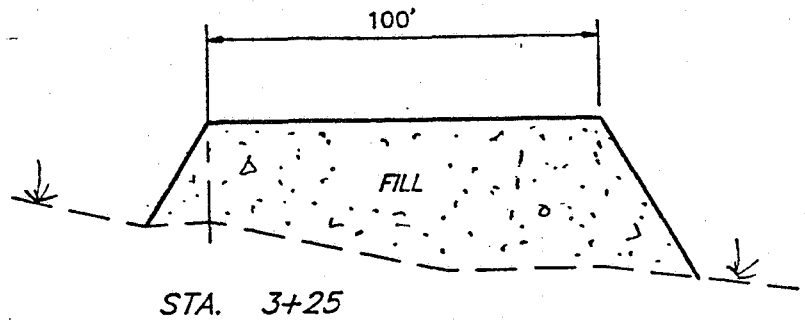
COORS ENERGY CO.
 LOCATION LAYOUT FOR
 FEDERAL 1-13 WM
 SECTION 13, T25S, R20E, S.L.B.&M.



SCALE: 1" = 50'
 DATE: 1-31-91
 Drawn By: T.D.H.

X-Section
 Scale
 1" = 20'
 1" = 50'

TYP. LOCATION LAYOUT
 TYP. CROSS SECTIONS



Ungraded Ground at Location Stake = 4788.0'

Graded Ground at Location Stake = 4785.3'

UINTAH ENGINEERING & LAND SURVEYING
 85 So. 200 East Vernal, Utah

APPENDIX 3

MULTIPOINT SURFACE USE PLAN

COORS ENERGY COMPANY
FEDERAL 1-13WM
SECTION 13, T25S-R20E, NW/SE
GRAND COUNTY, UTAH
LEASE NO. U-48755

Coors Energy Company will assure that this APD will be posted in the doghouse of the drilling rig during the drilling of this well. Also, a sign will be posted at the entrance to the location with the name of the well, operator and location description. We will notify the Moab BLM 48 hours prior to beginning any work on this land. Prior to starting surface construction operations, the dirt contractor shall have a completed approved copy of this APD.

1. EXISTING ROADS - See Exhibits C, D, E

Access to the Federal 1-13WM begins at Moab, Utah and proceeds northwesterly for approximately 10.9 miles to the Seven-Mile turnoff, turn left (west) and proceed along this road westerly for approximately 7.9 miles, and then southerly another 4.7 miles to a junction (Gemini Bridge cutoff), then turn left onto an existing access road, and proceed northeasterly another 8.3 miles to the proposed access road to the Federal 1-13WM location.

2. PLANNED ACCESS ROAD - See Exhibits C, D, E

The planned access road will be approximately 0.5² miles long. Surface disturbance and vehicular travel will be limited to approved location and access road. The access road will be rehabilitated within 60 days if the well is plugged and abandoned from the time the rig leaves the location. If for any reason, this is a problem, the Moab BLM will be notified.

Maintenance will consist of periodic grading and repairs to the surface. Rain and other inclement weather may require repairs to ditches, culverts, waterbars, if these are required. The road will be constructed as necessary for good drainage and to prevent washes; the road will be smooth, free of ruts, chuckholes, rocks, slides, etc. Any shouldered will be straight and have no berms.

The existing access road will require upgrading for approximately 4 miles before reaching the location. If there are steep grades, these will be cut and filled to meet an acceptable grade.

No surface gravel or dirt will be used from BLM sources. The new access road will be constructed with a 16' wide road surface. Not over 20' will be cleared to construct the new access road.

3. LOCATION OF EXISTING WELLS

Within a one-mile radius of this proposed well there is one P&A'd well:

Government Potash #7 located in Section 13, T25S-R20E.

There are no:

- a) known water wells
- b) temporarily abandoned wells
- c) disposal wells
- d) injection wells
- e) monitoring or observation wells
- f) drilling or completing wells

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

Coors Energy Company has no facilities in this area at this time. Any future production facilities will be located on the well pad and painted in an earth-tone color as specified by the BLM. If the well becomes a producer, a Sundry Notice will be provided to the BLM to request approval of the production facilities.

5. LOCATION AND TYPE OF WATER SUPPLY

Coors Energy Company is in the process of obtaining a water permit from the State of Utah to acquire water during the drilling of this well. Approximately 6000 barrels of water will be required to drill and complete this well. Upon receipt of the permit, a copy will be sent to you to include as part of this permit.

6. SOURCE OF CONSTRUCTION MATERIALS - See Exhibit B

The location contains approximately 1.28 acres. The top 6" of topsoil will be removed from the well pad and stored on the northeast side of the location. Topsoil along the access road will be left in place. Access to the location will be from the south corner of the pad. The reserve pit will be on the southeast side of the location. The pit will be lined with 10 mil plastic liner to conserve water. Fill materials needed to construct the location will be derived locally from cuts needed to build the well pad. Any artifacts found on BLM lands will be left in place and the BLM promptly notified.

7. METHODS FOR HANDLING WASTE DISPOSAL

Upon completion of the well, the mud reserve pit will be allowed to dry and then back-filled and the area restored according to BLM requirements.

The reserve pit will be fenced on three sides with 36" woven sheep wire with two strands of barbed wire on top of the sheep wire. If the well is a producer, upon completion of the drilling operations, the fourth side will be fenced. The fence around the reserve pit will be kept in good repair while the reserve pit is drying. Produced waste water will be confined to the pit for a period not to exceed ninety (90) days after initial production. During the ninety (90) day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

All garbage and trash will be placed in a trash cage and hauled to an appropriate disposal site. No burning of any trash will occur at the location. Trash, litter and construction materials will not be littered along roadways or drilling sites. Any disturbed area not required for producing operations will be restored according to BLM instructions. The production facilities will create no additional surface disturbances. A chemical-type toilet will be used on the wellsite.

8. ANCILLARY FACILITIES

There will be camp facilities on location as part of the drilling operations.

9. WELLSITE LAYOUT - See Exhibit B

A plat is attached showing the rig layout. All necessary surface equipment will be spotted on the 215' x 325' wellsite pad.

10. PLANS FOR RESTORATION OF SURFACE

Surface vegetation scraped off during drill site preparation will be removed and stockpiled prior to topsoil removal. Upon abandonment, vegetation will be redistributed as a mulching agent over the wellsite. The top 6" of topsoil will be stockpiled on the southeast corner of the well site as shown on the wellsite layout.

The reserve pit and that part of the location not needed for production operations will be reclaimed within 90 days after completion of the well. Revegetation and screening for visual effect will be done in accordance with BLM stipulations.

The original surface will be reconstructed as close as possible upon abandonment. The stockpiled topsoil will be spread over the area. Any solid waste material present prior to abandonment will be removed from the location. Any oil or harmful liquids will be removed by a pump truck to an approved disposal area.

Before any dirt work to restore the location takes place, the reserve pit will be completely dry and all trash will be removed. The access road will be blocked during restoration. Prior to reseeding, all disturbed areas, including the access road, will be scarified and left with a rough surface. The reserve pit, and that part of the location not needed for production, will be reclaimed in the same manner outlined in this Section. The rehabilitated access road will be blocked to prevent any vehicle use.

The topsoil will be tested to determine if fertilizer is needed to re-establish vegetation. After spreading the stockpiled topsoil, the following seed mixture or a similar seed mixture will be used to re-establish the vegetation:

Indian Ricegrass	2#/acre
Curlygrass	1#/acre
Sand Dropseed	1/2#/acre
Torrey Mormon Tea	1/2#/acre
Winterfat	1#/acre
Yellow Sweet Clover	1#/acre

The planting program will be completed as per BLM instructions at the time of site restoration.

Coors Energy Company will notify the BLM in Moab, Utah 48 hours prior to starting rehabilitation work.

11. OTHER INFORMATION - See Exhibit H

The Federal 1-13WM is located approximately 6-1/2 miles northwest of Moab, Utah.

It is Coors' policy that no Coors' employee nor subcontractors carry firearms on access roads nor onto the location during drilling or well completion operations of this well. No prospecting will be allowed on Coors' operations. All operators, subcontractors and vendors will be confined to established roads and wellsites.

The surface and mineral ownership of this property belongs to the Federal Government. Attached is a copy of Federal Lease Agreement U-48755 conveying approval to Coors Energy Company to drill on this land.

Due to Desert Big Horn sheep lambing, this well will not be drilled until after June 1, 1991.

12. COORS' CONTACTS

Doug Sprague	Jim Simonton
Manager, Engineering/Operations	Field Supervisor
Oil & Gas Operations	Coors Energy Field Office
Coors Energy Company	PO Box 460
PO Box 467	Roosevelt, Utah 84066
Golden, Colorado 80402	Phone: (801) 722-2531
Phone: (303) 278-7030	

13. CERTIFICATION OF OPERATOR

See Exhibit "F" attached.

KR

3/25/91

APPENDIX 4

8320 - PLANNING FOR RECREATION RESOURCES

Description of Recreation Opportunity Spectrum Classes

The enclosed chart describes each of the six ROS classes in terms of: (1) experience opportunities; (2) setting opportunities, and (3) activity opportunities (see also Glossary of Terms). These descriptors provide a general overview of the opportunities included in each class. These overview statements do not describe each class in detail, but rather pro-

vide a point of departure from which the planner or manager can develop more precise prescriptions for each class based on specific situations encountered in field operations. The listing of activity opportunities is provided for illustrative purposes. It is not an all-inclusive list of activity opportunities on the public lands.

THE RECREATION OPPORTUNITY SPECTRUM CLASS DESCRIPTIONS

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
Primitive	Opportunity for isolation from the sights and sounds of man, to feel a part of the natural environment, to have a high degree of challenge and risk, and to use outdoor skills.	Area is characterized by essentially unmodified natural environment of fairly large size. Concentration of users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Only facilities essential for resource protection are used. No facilities for comfort or convenience of the user are provided. Spacing of groups is informal and dispersed to minimize contacts between groups. Motorized use within the area is not permitted.	Camping, hiking, climbing, enjoying scenery or natural features, nature study, photography, spelunking, hunting (big game, small game, upland birds, waterfowl), ski touring and snowshoeing, swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (non-motorized craft).
Semi-Primitive Nonmotorized.	Some opportunity for isolation from the sights and sounds of man, but not as important as for primitive opportunities. Opportunity to have high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills.	Area is characterized by a predominantly unmodified natural environment of moderate to large size. Concentration of users is low, but there is often evidence of other area users. On-site controls and restrictions may be present, but are subtle. Facilities are provided for the protection of resource values and the safety of users only. Spacing of groups may be formalized to disperse use and limit contacts between groups. Motorized use is not permitted.	Camping, hiking, climbing, enjoying scenery or natural features, nature study, photography, spelunking, hunting (big game, small game, upland birds, waterfowl), ski touring and snowshoeing, swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (non-motorized craft).

THE RECREATION OPPORTUNITY SPECTRUM CLASS DESCRIPTIONS—*Continued*

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
Semi-Primitive Motorized.	Some opportunity for isolation from the sights and sounds of man, but not as important as for primitive opportunities. Opportunity to have high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills. Explicit opportunity to use motorized equipment while in the area.	Area is characterized by a predominantly unmodified natural environment of moderate to large size. Concentration of users is low, but there is often evidence of other area users. On-site controls and restrictions may be present, but are subtle. Facilities are provided for the protection of resource values and safety of users only. Spacing of groups may be formalized to disperse use and limit contacts between groups. Motorized use is permitted.	Same as the above, plus the following: ORV Use (4-WD, Dune Buggy, Dirt Bike, Snowmobile), Power Boating.
Roaded Natural	About equal opportunities for affiliation with other user groups and for isolation from sights and sounds of man. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities are not very important except in specific challenging activities. Practice of outdoor skills may be important. Opportunities for both motorized and nonmotorized recreation are present.	Area is characterized by a generally natural environment with moderate evidence of the sights and sounds of man. Resource modification and utilization practices are evident, but harmonize with the natural environment. Concentration of users is low to moderate with facilities sometimes provided for group activity. On-site controls and restrictions offer a sense of security. Rustic facilities are provided for user convenience as well as for safety and resource protection. Conventional motorized use is provided for in construction standards and design of facilities.	All activities listed previously, plus the following: picnicking, rock collecting, wood gathering, auto touring, downhill skiing, snowplay, ice skating, water skiing and other water sports, hang gliding, interpretive use, rustic resorts and organized camps.
Rural.....	Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of sites and opportunities. These factors are generally more important than the natural setting. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant, except in those activities involving challenge and risk.	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are obvious. Sights and sounds of man are readily evident, and the concentration of users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for specific activities. Developed sites, roads and trails, are designed for moderate to high use. Moderate densities are provided far away from developed sites. Facilities for intensive motorized use are available.	All activities listed previously, plus the following: competitive games, spectator sports, bicycling, jogging, outdoor concerts, and modern resorts.

THE RECREATION OPPORTUNITY SPECTRUM CLASS DESCRIPTIONS—*Continued*

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
Modern Urban	Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of sites and opportunities. Experiencing the natural environment, and the use of outdoor skills are largely unimportant.	Area is characterized by a highly modified environment, although the background may have natural elements. Vegetation is often exotic and manicured. Soil may be protected by surfacing. Sights and sounds of man, on-site, predominate. Large numbers of users can be expected. Modern facilities are provided for the use and convenience of large numbers of people. Controls and restrictions are obvious and numerous. Facilities for high intensity motor use and parking are present with forms of mass transit often available.	All activities listed previously.

APPENDIX 5

NARRATIVE FOR VISUAL RESOURCES MANAGEMENT

A contrast rating form and associated narrative were prepared for the well site and the two potential access roads, all of which are in the Class II area. The analysis assumes the well site is fixed and the alternative being evaluated is accessing the well from the east along the lower dugway.

In addition to the contrast rating forms a view shed analysis using the Moab District GIS system was conducted to determine the area from which the proposed action is visible. This analysis used a height of 132 feet for the drilling rig and used the USGS 3 Arc-Second DEM data base maps, this equates to a cell size of approximately 100 M X 100 M. Although this is a large cell size it was felt that this would adequately identify any critical areas within the view shed of the proposed action.

An additional viewshed analysis was conducted using a height of 30 feet. This analysis was conducted to identify critical areas where the most obtrusive elements and tanks, drill house and support structures would be apparent in the landscape.

The land forms in the area can be described as angular with broken blocks, the line form is horizontal tending to angle up toward the mouth of the canyon. This form is a result of the exposed bedding planes and other rock forms along the sides of the canyon. The middle to background is dominated by tall walls with vertical cracks running up these walls. The vegetation is not uniform throughout the site presenting a mottled appearance. The vegetation is low and does not present a dominant element in the landscape. The exposed ground and rock forms run from deep ochre-reds to gray-green colors. The site is located near a dominant red rock form. Although the site is near the mouth of the canyon it is situated toward the south side and back from the cliff band that overlooks US191. The site is in a somewhat homogenous landscape area with a low ability to absorb change. There is not a major diversity in either the topography or the vegetation in the immediate area. However there is some diversity in the land form colors that will contribute to the ability of the area to absorb change. The vertical background is not juxtaposed to the site and therefore does not contribute to the ability of the site to absorb change unless viewed from a distance. There is one main road that runs down the length of the canyon and this is the road that is proposed for access to the site. In addition to this there are indications of people driving in areas other than this road, although these are not highly visible in the landscape. The view shed analysis identified a seen area of up to twenty miles. Within this seen area are a number of popular and highly scenic recreation areas including the windows and Fiery Furnace areas of Arches National park and Long Canyon area managed by the Bureau of Land Management. These areas are distant from the site and only the top of the drilling rig and not the pad or support facilities would be visible. This rig would probably not be apparent in the landscape from these areas unless one was specifically looking for it, except at night when the rig would be lighted. The campgrounds and other areas that are presently used at night within the Arches National Park are not within the viewshed. Overall, the location of this proposed action is such that it is not visible to a large area of popularly-used land and would be developed during a low use period in those areas where it is highly visible.

DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
ELEMENTS	Form		X	X		X				X	X			3. Additional mitigating measures recommended <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
	Line		X				X			X					
	Color			X		X				X					
	Texture			X		X				X					
Evaluator's Names															Date
MIKE O'DONNELL															5/8/91

SECTION D. (Continued)

Comments from item 2. DURING THE DEVELOPMENT PHASE OF THIS PROJECT THERE WILL BE NUMEROUS VEHICLES, TANKS, METAL STRUCTURES ON SITE. IN ADDITION TO THIS THE GROUND DISTURBANCE WILL BE VERY EVIDENT. THIS EVALUATION FORM LOOKS AT THIS PERIOD OF TIME & DOES NOT ADDRESS THE PRODUCTION PHASE. IT IS ~~PER~~ POSSIBLE TO TAKE SOME MITIGATING ACTION DURING PRODUCTION TO BRING THIS FACILITY UP TO "CLASS II" VRM STANDARDS.

Additional Mitigating Measures (See item 3)

KEEP GROUND DISTURBING ACTIONS TO A MINIMUM. THE LESS CUTTING INTO THE HILLSIDE ~~THERE~~ IS THE SMALLER THE VISUAL OBSTRUCTION. THE ACCESS ROAD COULD FOLLOW THE CURVES IN THE LAND, STAYING LOW, AND THIS VISUAL IMPACT WOULD BE MINIMIZED.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date

5-8-91 WARM CLEAR DAY

District

MOAB

Resource Area

GRAND

Activity (program)

SECTION A. PROJECT INFORMATION

*1. Project Name (GEMINI BRIDGES ACCESS RT.)

COORDS WELL # U-48755

2. Key Observation Point * ON ACCESS ROAD
BELOW AREAS IDENTIFIED FOR MODIFICATION
LOADING UP AT MODIFICATIONS

3. VRM Class II

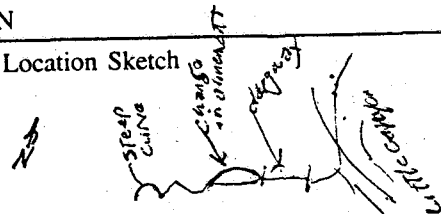
4. Location

Township 255

Range R 20E

Section 13

5. Location Sketch



ARE AREA WITH PROPOSED ROAD CHANGE

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	ROUNDED CURVING BLOCKS	SILVER GREEN TO DEEP JUNIPER GREEN MOUNDS & CLUMPS - SPOTTY FORM	ROAD EVALUATED AS A LAND FORM
LINE	CURVING TO HORIZONTAL FORM	DOTS & ROUND CLUMPS CURVES	
COLOR	SOFT GRAY TO DEEP RUST MOSTLY GRAY TO GREY GREEN	GREY-GREEN TO JUNIPER GREEN	
TEXTURE	SMOOTH TO MODERATE SMOOTH	ROUGH ?	

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	ANGULAR TO GEOMETRIC FORMS, SOME CURVING BLOCKS	N/A	EVALUATED & LAND FORM
LINE	CURVING TO HORIZONTAL		
COLOR	SOFT GRAY TO DEEP RUST MOSTLY GRAY GREEN		
TEXTURE	SMOOTH - SOME MODERATE		

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

I. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)		
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)						
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None			
ELEMENTS	Form		X													3. Additional mitigating measures recommended <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
	Line			X												
	Color		X													
	Texture			X												

Evaluator's Names

MIKE O'DONNELL

Date

5/8/91

Comments from item 2.

Additional Mitigating Measures (See item 3)

CARE SHOULD BE TAKEN TO MINIMIZE AREA DISTURBED. ~~THE~~ ROCKS ALONG ROAD EDGES DON'T FORM AN OBVIOUS "ROAD GRADER" LINE.

* DURING A FIELD VISIT REPRESENTATIVES FROM COORS, UDOT & BLM LOOKED AT AREAS ALONG THE "GEMINI BRIDGES" ROUTE & ACROSS LITTLE CANYON THAT MAY BE UPGRADED FOR THE WELL DEVELOPMENT. ~~SEVEN~~ FOUR AREAS WERE IDENTIFIED BUT ONLY TWO INVOLVED ANY SIGNIFICANT CHANGES IN ANGLE OR ALIGNMENT. THIS FORM LOOKS AT THOSE TWO AREAS. THE FIRST IS ABOVE THE DUGWAY GOING INTO LITTLE CANYON, THE SECOND IS A STEEP TIGHT CORNER APPROXIMATELY 1/4 MILE ABOVE THAT DUGWAY.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date

5/8/91

District

MOAB

Resource Area

GRAND

Activity (program)

SECTION A. PROJECT INFORMATION

1. Project Name

* COORS WELL #4-43755

2. Key Observation Point

HIGHWAY 191 NEAR TRAILHEAD PARKING

3. VRM Class

II

4. Location

Township 25S

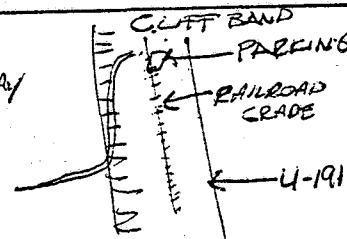
Range E. 10E

Section 13

5. Location Sketch

DUGWAY

N



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES MINES
FORM	BROKEN, ANGULAR, BLOCKS	SPOTS DOTS	ROAD GRADE
LINE	HORIZONTAL TO ANGULAR.	SPOTS & ROUND CLUMPS.	THE EXISTING ROAD & OLD MINES ARE EVALUATED AS A PART OF THE EXISTING LAND FORM
COLOR	RED BROWN, GREY	SILVER GREY	
TEXTURE	ROUGH	FINE TO NONE	

SECTION C. PROPOSED ACTIVITY DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	CURING, ANGULAR BLOCKS		ROAD AS A LAND FORM.
LINE	HORIZONTAL, ANGLES AN SLOPING		
COLOR	GRAY TO RED BROWN		
TEXTURE	ROUGH		

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
ELEMENTS	Form			X											3. Additional mitigating measures recommended <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
	Line			X											
	Color				X										
	Texture			X											
Evaluator's Names														Date	
MIKE O'DONNELL														5/8/91	

SECTION D. (Continued)

Comments from item 2. THIS EVALUATION ASSUMES ONLY MINIMAL CHANGES IN THIS ROAD. - SOME DECREASES OF GRADES, WIDENING OF SECTIONS & INCREASING RADII. THIS AREA HAS A ROUGH TEXTURE & ~~THE~~ THE ABILITY FOR HIGH ABSORPTION OF ^{LAND} DISTURBANCE. THERE ARE CURRENTLY SURFACE DISTURBANCES THAT BLEND IN WITH INCLUDING MINING TAILINGS AND OLD ROAD WORK.

Additional Mitigating Measures (See item 3)

* THIS EVALUATION ASSUMES THE DUGWAY GOING FROM LITTLE CANYON TO U-191 WOULD BE UPGRADED TO HANDLE LARGER VEHICLES. THIS UPGRADE INCLUDES SOME WIDENING & SMOOTHING OF SURFACE & ~~DEEPEN~~ DECREASING SOME OF THE GRADES ON STEEPER SECTIONS.

APPENDIX 6

Excerpts from "Behavioral Respose of Desert Bighorn Sheep to Human Harassment:
A Comparison of Disturbed and Undisturbed Populations"
Michael M. King, 1984

It was predicted that bighorn inhabiting Red Canyon, a high disturbance area, would be more reactive, flee farther, exhibit more group wariness, and have more significant alterations in normal activity budgets. These bighorn have been subjected to high hunting pressure and high vehicular traffic relative to the White Canyon bighorn which are in a low disturbance area. The Red Canyon bighorn were in fact more sensitive to harassment trials than the White Canyon bighorn. Red Canyon bighorn reacted more frequently to human harassment trails by fleeing, whereas White Canyon bighorn responded most commonly with non-flight behaviors. Distance fled by Red Canyon bighorn was approximately 1.6 times farther than for White Canyon bighorn when walking flight was the observed response and 2.5 times farther when running flight was the observed response.

Red Canyon bighorn showed a higher degree of group wariness for longer periods of time than White Canyon bighorn when faced with constant presence of harassing stimuli. Activity budgets of Red Canyon bighorn were significantly different than those of White Canyon bighorn when animals were harassed. Red Canyon animals spent more time at attention and less time feeding than White Canyon animals when they were harassed. Behavior was similar for both areas when bighorn were observed under unharassed conditions.

Harassment in any season can have negative impacts on desert bighorn depending on the intensity of the disturbance. However, there are times when the effects of harassment will be more severe.

Results of this study indicate that bighorn are more sensitive to human disturbance in the spring and summer and least sensitive to human disturbance during fall and winter. Spring harassment can be particularly harmful to pregnant or lactating ewes in terms of energy costs. Rapid growth by lambs and lactation by ewes demand high amounts of energy (Moen 1981). Energy spent in excitement of flight would subtract from the total needed to maintain adequate milk production and growth.

Summer can also be a critical season for desert bighorn in southeast Utah as well. Response to harassment and distances fled are comparable to those for spring, but unlike spring when forage is relatively nutritious, forage is at its lowest nutrient levels (Hull 1984). Flights from harassing stimuli can be particularly severe if energy expended cannot be recovered from nutrients available in their diet. Bighorn may also suffer from excessive heat loading if forced to flee during extremely high temperatures common to desert habitats. Efforts to cool body temperatures to tolerable levels add further energetic costs (National Research Council 1981). Measures should be taken to

APPENDIX 7

Issues as Identified by the Public
During the Public Comment Period Provided for the Proposed
Coors 1-13WM in Little Valley

- Will water from the Colorado River be used for drilling and dust suppression on the proposed location and access road?

During preparation of the Environmental Assessment the water source was changed by Coors from the Colorado River (as identified in their surface use plan) to the City of Moab's shop water tower. A letter in the BLM/GRA casefile for the Coors 1-13WM well dated 5/14/91, signed by Brent Williams, authorizes the use of Moab City Water for the drilling of the Coors well.

- Will drilling have an adverse impact on the groundwater?

Coors does not expect to encounter any fresh water aquifers based on geologic information obtained from prior drilling activity. Provisions in Coors drilling plan to protect subsurface water, if encountered, will be accomplished in accordance with both State and Federal regulations.

- Is the Potash bighorn sheep herd one or two distinct herds?

The text in the EA has been changed to reference one herd separated by different administrative boundaries (see EA, page 11).

- Will the drilling of one well have a measurable impact on the bighorn sheep in Little Canyon?

Drilling is not expected to cause permanent displacement of bighorn since it will only last approximately 45 days.

- Have other alternative sitings been looked at in detail?

Additional information has been provided on page 5 of the EA.

- Has the BLM considered requiring the operator to restore the road to its original (prior to drilling) condition?

This road is a Class "B" county road. BLM has entered into an agreement with Grand County to restore the road to its original condition in the event the well is a non-producer. If the well does produce, the road would be allowed to remain in the upgraded condition until an alternative system for moving the product (i.e. pipeline) can be provided. (See Decision Record Rationale).

- Has the hydrology of the area been considered?

The hydrology in the area of the pad construction was taken into account. The pad was located in such a manner as to reduce potential runoff problems by siting the pad away from the existing drainages. This was agreed to at the time of the onsite inspection. The location was also moved away from the adjacent slope to provide better siting of the reserve pit and to minimize side-slope cut on the uphill side. The access road between County Road #21 and the pad was changed to reduce the number of drainage crossings and the overall length of the road.

- Have cumulative impacts been considered not only for oil and gas exploration, but also for other activities taking place in the area.

Cumulative impacts have been addressed in the Dec. 1988 RMP Supplemental Environmental Assessment. A section on cumulative impacts has been added to the EA, page 14.

- Will those individuals working on the drilling operation be camping on public lands in the area of the proposed well?

In the proposed action, Coors indicated that three self-contained camp trailers will be located on the location (EA, page 4).

- Is the drilling proposal inconsistent with the VRM classification for the area?

The VRM rating system is a management tool to help reduce impacts to the visual resource. It does not preclude actions which are inconsistent with VRM Classes. Due to the short time frame of the drilling activity, and the fact that it is occurring during the low use season for visitation, the visual intrusion was determined as acceptable considering the limitations. (See page 10 of the EA).

- Why weren't production related impacts analyzed in this EA?

If production is achieved a subsequent environmental assessment will be prepared addressing the additional impacts. Production facility impacts were addressed in the RMP and Supplemental RMP.

- What will the company do to reduce noise during the drilling activity?

Coors has subsequently agreed to provide exhaust mufflers on the power-generating equipment. (See Proposed Action in EA, page 4).

Memorandum of Agreement
Between the Bureau of Land Management
and the Grand County Commission
on County Class "B" Road #21

I. Introduction and Purpose

The Bureau of Land Management (BLM) and the Grand County Commission have determined that County Class "B" Road #21 should remain in its original (current as of 6/24/91) condition in order to reduce the potential cumulative impacts resulting from proposed oil and gas drilling and recreational use in the the Little Canyon/Gemini Bridges Area. Of primary concern is the possible impacts that increased visitation may have on the existing bighorn sheep population using this area. By leaving the road in its current condition, it is anticipated the visitation will remain at a constant level of use, thereby mitigating the secondary impacts a high quality road would have on bighorn sheep.

II. General Provisions

1. The County agrees that County Road #21 will be returned to its "original" condition (or as near the original condition as possible) following exploration if the well is not found to be capable of production.
2. If production is established the road will be upgraded to the level necessary to allow for transportation of the product off site until some alternative system (pipeline) can be provided. Once the alternative system is completed, County Road #21 will be restored to its "original" condition (or as near the original condition as possible.)

III. Termination

The BLM recognizes Grand County's responsibility and authority to maintain county roads in a manner consistent with their policy and goals.

Each party of this Memorandum of Agreement may terminate this MOA after not less than 30 days prior notice to the other party. During the intervening 30 days the parties agree to actively attempt to resolve any disputes or disagreements.

For the Bureau of Land Management

Date:

Signed:

Title:

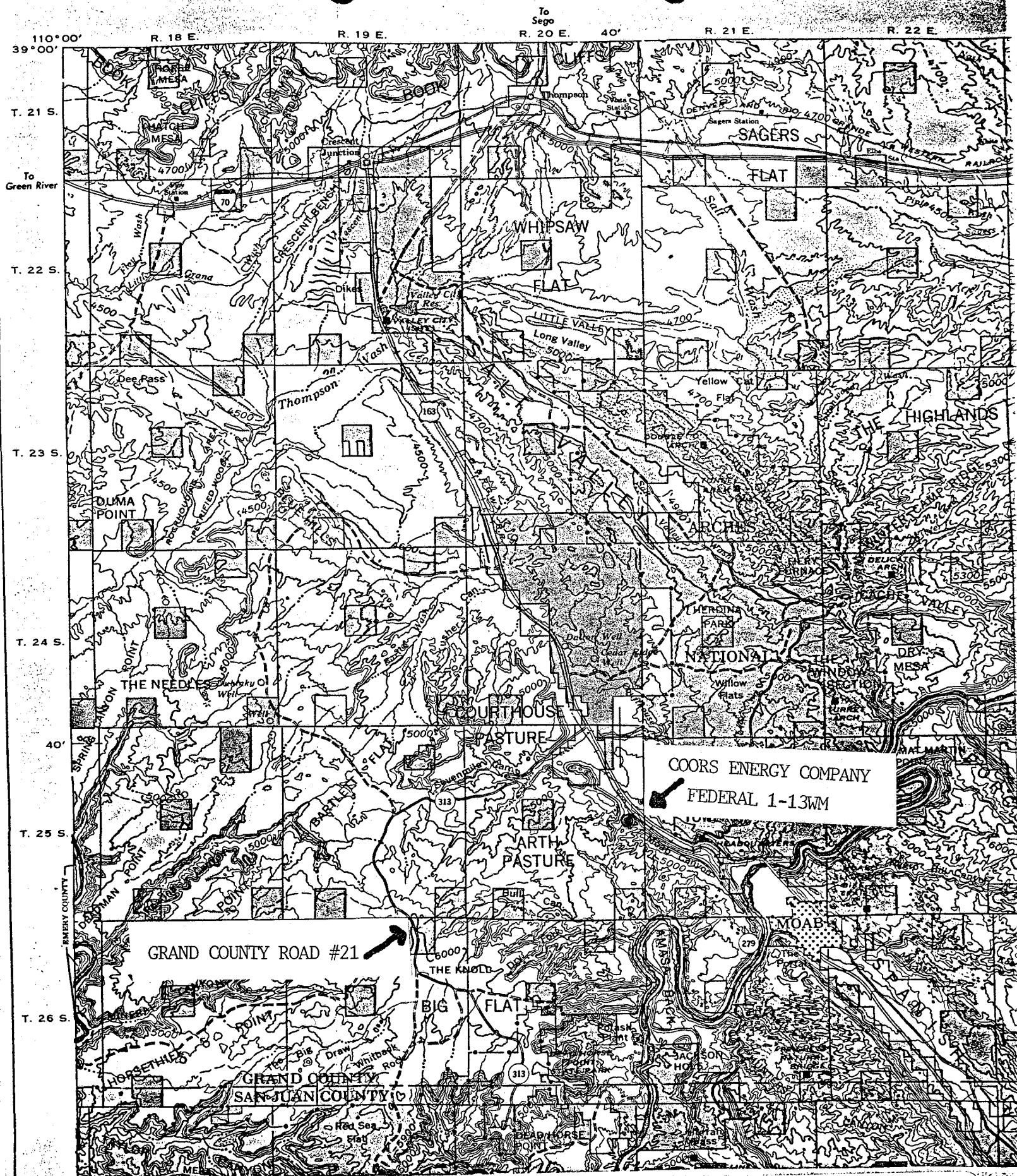
For Grand County Commission

Date:

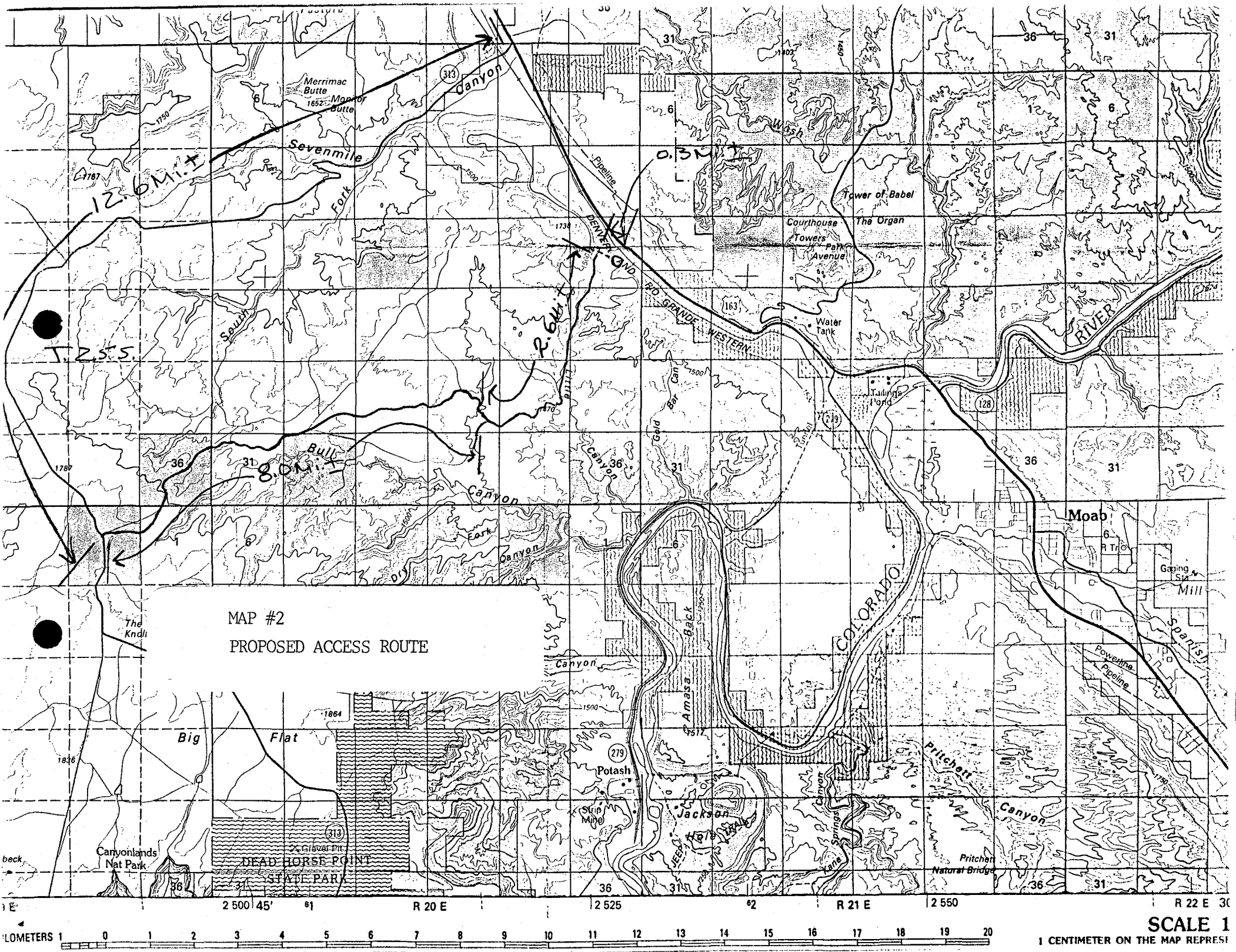
Signed:

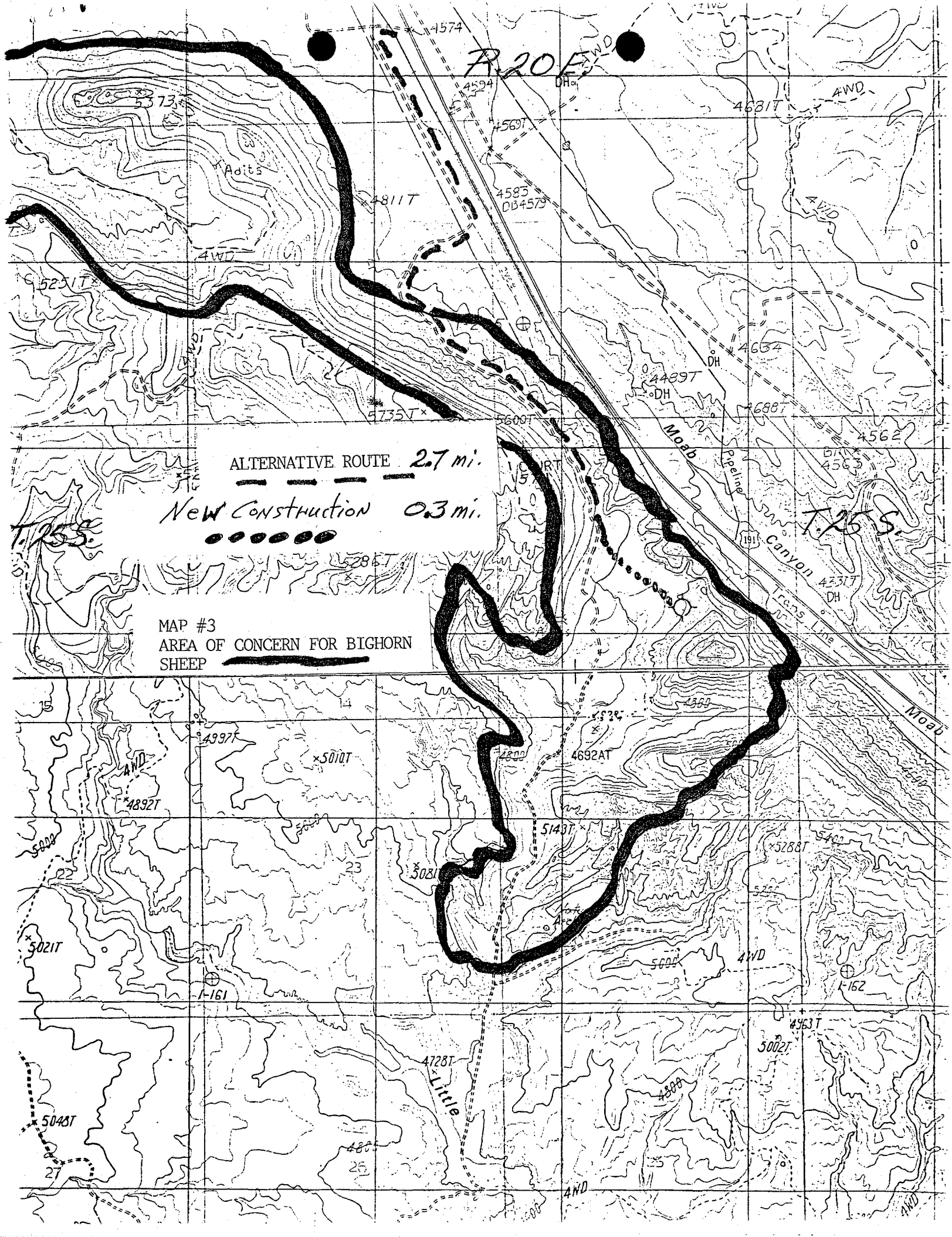
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MAPS



MAP #1
General Location





ALTERNATIVE ROUTE 2.7 mi.

New Construction 0.3 mi.

MAP #3
AREA OF CONCERN FOR BIGHORN
SHEEP

Energy firm gets approval to drill test well near park

■ **Arches:** Permitting oil, gas exploration near bighorn habitat likely to spark renewed environmental fight.

By Jerry Spangler
Deseret News staff writer

Coors Energy Co. has been granted approval by the Bureau of Land Management to drill a test well in Little Canyon just outside Arches National Park — a decision that promises to spark renewed environmental battles over oil and gas development in southern Utah.

The BLM decision allows oil and gas exploration in an area northwest of Moab that happens to be critical habitat for the last native bighorn sheep herd in the state.

Scott Groene, staff attorney for the Southern Utah Wilderness Alliance, said he has not seen the BLM's formal decision on the matter, but is nonetheless disappointed because it "still allows development in an area that should not have development. There are too many other values at stake."

In addition to concerns over bighorn sheep, the BLM decision could eliminate one of Moab's most popular mountain bike trails — the Gemini Bridges road. "If they strike oil and start running tanker trucks into that area, it won't be real conducive to mountain bikes," Groene said.

The BLM decision calls for 10 to 12 miles of the road to be upgraded to handle the truck traffic.

Under the provisions of the permit, Coors cannot begin operations until June 1992. Coors' original ap-

plication was approved June 25 of last year, but the BLM rescinded the approval after environmental appeals made it evident that Coors would not be able to drill during the approved time period.

According to environmental studies, the best time to conduct operations in Little Canyon is during the summer. Prior to that, the bighorn sheep use the canyon for lambing, which is usually concluded by June.

A statement released by the Moab District of the BLM states, "The BLM has concluded that the Coors well can be drilled in an environmentally sound manner with no significant impacts to the other resources in the area. In addition, results from the Coors exploration well should provide important information about the future of oil and gas activities around the Moab area."

The BLM expects its action will be challenged in court. Most oil and gas activities in the area have been challenged through an administrative appeals process in the past.

However, the number of environmental appeals and the impact of those appeals on the oil and gas industry led the Department of Interior last month to enact rulemaking that prevents interruption of oil and gas operations on public lands. The new rules allow BLM decisions to remain in effect during any appeals.

Environmentalists targeted this development because of its proximity to Arches National Park and because of its critical role in bighorn sheep migrations between Arches and areas inside the park.

They are also concerned that the scenic values of the area will be compromised. The development, which will likely not be seen from Arches, is "a very scenic, quiet place with unusual values," Groene said.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Coors Energy Company

3. ADDRESS OF OPERATOR

PO Box 467, Golden, Colorado 80402

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

1708' FSL, 2272' FEL, NW/SE

At proposed prod. zone

same

43-019-31321

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

approx. 7 miles SW of Moab/32.3 miles by road

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drig. unit line, if any)

1708'

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

None

16. NO. OF ACRES IN LEASE

2,556.64

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

19. PROPOSED DEPTH

7500'

20. ROTARY OR CABLE TOOLS

rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

4788' GL

5. LEASE DESIGNATION AND SERIAL NO.

U-48755

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Federal

9. WELL NO.

1-13WM

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

Sec. 13, T25S-R20E

12. COUNTY OR PARISH

13. STATE

Grand

Utah

RECEIVED

APR 06 1992

DIVISION OF
OIL GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

W.C. Stringer
D.S. Sprague

TITLE

Manager/Engineering/
Operations

DATE

3-29-91

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

/S/ WILLIAM C. STRINGER

Assistant District Manager

DATE

APR - 1 1992

CONDITIONS OF APPROVAL, IF ANY:

TITLE

for Minerals

FLARING OR VENTING OF
GAS IS SUBJECT TO NTL 4-A

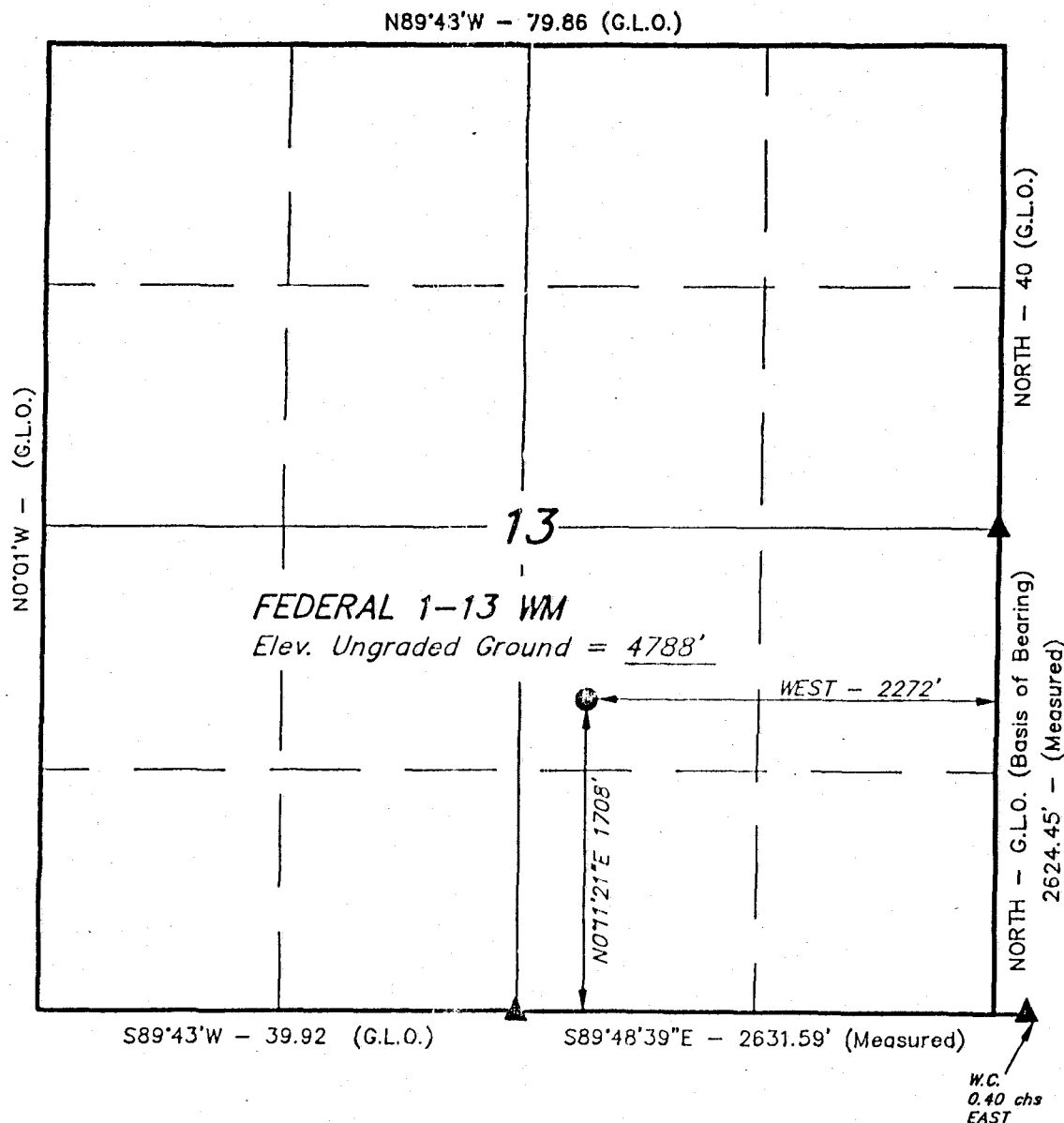
Dated 1/1/80

CONDITIONS OF APPROVAL ATTACHED

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

T25S, R20E, S.L.B.&M.



▲ = SECTION CORNERS LOCATED. (BRASS CAPS)

COORS ENERGY CO.

Well location, FEDERAL 1-13 WM, located as shown in the NW 1/4 SE 1/4 of Section 13, T25S, R20E, S.L.B.&M. Grand County, Utah.

BASIS OF ELEVATION

U.S.G.S. BENCH MARK ON A BRIDGE ABUTMENT IN THE NE 1/4 OF SECTION 19, T25S, R21E, S.L.B.&M. TAKEN FROM THE GOLD BAR CANYON QUADRANGLE, UTAH, GRAND & SAN JUAN COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON THE CAP AS BEING 4221.61'



EXHIBIT "A"

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. Kay
REGISTERED LAND SURVEYOR
REGISTRATION NO. 5709
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX 1758 - 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 1-31-91
PARTY J.T.K. H.C. R.E.H.	REFERENCES FIELD MAP - G.L.O. PLAT
WEATHER COLD	FILE COORS ENERGY CO.

Be advised that Coors Energy Company is considered to be the operator of Well No. Fed. 1-13WM, (1/4 1/4) NESE, Sec. 13, T. 25S., R. 20E., Lease U-48755, Grand County, Utah and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond Coverage for this well is provided by Bond No. 568-18-93 (CO-0019). (Principal Coors Energy Company) via surety consent as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

Coors Energy Company
Federal No. 1-13MW
NWSE Sec. 13, T. 25 S., R. 20 E.
Grand County, Utah
Lease U-48755

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Coors Energy Company is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by CO-0019 (Principal - Coors Energy Company) via surety consent as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

This permit will be valid for a period of one year from the date of approval. A one-time, 90 day extension of this period may be granted. After permit termination, a new application must be filed for approval.

All lease operations will be conducted in full compliance with applicable regulations (43 CFR 3100), Onshore Oil and Gas Orders, lease terms, notices to lessees, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions and the approved plan will be made available to field representatives to insure compliance.

A. DRILLING PROGRAM

1. There will be no deviation from the proposed drilling and/or workover program without prior approval from the Assistant District Manager. "Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2. Safe drilling and operating practices must be observed.

2. Daily drilling and completion progress reports shall be submitted to the District office on a weekly basis.

3. The BLM shall be kept apprised of all fluids entering or leaving the pit, through either weekly drilling reports or a final status report, submitted with the completion report. Either of which shall be submitted prior to reclamation of the pits.

4. No trivalent or hexavalent chromate additives shall be used in the mud system. Due to potential for contamination of usable quality water aquifers, chromates are banned from Federal leases.

5. BOP systems will be consistent with API RP 53 and Onshore Oil and Gas Order No. 2. Pressure tests of the surface casing and all BOP equipment potentially subject to pressure will be conducted before drilling the surface casing shoe. Blowout preventer controls will be installed prior to drilling the surface casing shoe and will remain in use until the well is completed or abandoned. Ram preventers shall be inspected and operated each trip (no more than once a day is necessary), and annular preventers shall be inspected and operated weekly to ensure good mechanical working order. These inspections shall be recorded on the daily drilling report.

6. Operations authorized by this permit shall not be suspended for more than 30 days without prior approval of the Authorized Officer. All conditions of this approval shall be applicable during any operations conducted with a replacement rig.

7. When the completion program is determined, a sundry notice describing the completion shall be submitted to this office for approval.

8. Should the well become productive, the BLM, District Office must be notified no later than five business days after production begins. Notification shall be by letter or sundry notice, or orally to be followed by a letter or sundry notice.

9. Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMcf following its completion, whichever comes first, without prior written approval of the Authorized Officer.

10. Surface casing and intermediate casing shall be equipped with a centralizer on each of the bottom three joints.

11. As proposed in the drilling program, a cement bond log (CBL) or cement evaluation tool (CET) shall be run on the production casing to determine the cement top and bond quality. This log shall be promptly submitted to the BLM, District Office following logging operations.

12. Prior to drilling out of the surface casing shoe, a 2000 psi BOP system shall be in place, functional and tested. An annular preventer and proper choke manifold arrangement will satisfy the requirements of Onshore Order No. 2.

13. Pressure control equipment will be upgraded to a 10,000 psi system prior to drilling through the 9 5/8" intermediate casing shoe at 2950'. This equipment must also be configured and tested in accordance with Onshore Order No. 2 10M system.

14. Intermediate casing shall be set into the first clastic zone within the Paradox Formation.

15. If production casing will be set, cement shall be circulated to 100 feet into the intermediate casing.

B. SURFACE USE PLAN

Construction activities will not begin prior to June 15, 1992, unless written authorization is obtained from the authorized officer.

Drilling will only be allowed between July 1 and September 30 to reduce impacts to desert bighorn sheep and recreationists. This restriction does not apply to the operation and maintenance of production facilities. This restriction may be waived if the authorized officer determines that the timing of a specific action would not substantially interfere with the resource values being protected.

Coors will continue to work with the BLM and the Utah Division of Wildlife Resources (UDWR) in an on-going study to establish site-specific baseline data through the well drilling phase, to document bighorn response to initial oil and gas activity.

ACCESS - COUNTY ROAD #21

In order to provide for the safety of visitors to the public lands and protect against possible long-term impacts to recreation and bighorn sheep that may result from increased visitor use in the area, it is recommended that Coors Energy work in cooperation with Grand County and adhere to the following provisions:

1. The operator/contractor and their respective employees will observe a maximum speed of 30 miles/hour in order to provide for public safety. Warning signs will be placed at blind corners and other areas of limited visibility. These measures will be required during all phases of activity.
2. In order to reduce fugitive dust, the operator/contractor will be required to periodically water down the access road during construction and drilling operations.
3. If applicable, when the well is plugged and abandoned, the segments of County Road # 21, that were upgraded for drilling and production, should be restored to their prior condition, as provided in the December 18, 1991 Memorandum of Agreement between the Bureau of Land Management and Grand County Commission (see Appendix 12 of the amended EA).
4. The sandstone outcrops within the existing road alignment should not be destroyed by blasting or a dozer during the initial construction and drilling phase. Acceptable grades are to be attained by using fill material only, which will be removed upon well plugging and abandonment (if applicable).

CONSTRUCTION

1. The operator or his contractor will contact the Grand Resource Area Office in Moab, Utah (phone 801-259-8193) 48 hours prior to beginning any work on public land.

2. The dirt contractor will be furnished with an approved copy of the surface use plan and any additional BLM Conditions of Approval prior to beginning any work on public lands.
3. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
 - whether the materials appear eligible for the National Register of Historic Places;
 - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
 - a timeframe for the AO to complete and expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.
 - If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.
4. Surface disturbance and vehicular travel will be limited to the approved location and access route. Any additional area needed will be approved in advance by the authorized officer.
5. The cut and fill slopes of the location will be kept to a minimum and feathered as directed by the authorized officer during construction.
6. The access road and well pad will be sprinkled with water as needed to control dust.
7. Construction material and equipment will not be stored on the access road or well location without prior BLM approval.
8. The blow pit will be located and constructed to minimize the visual impacts of airborne dust during air drilling operations.

9. A bighorn water catchment (guzzler) will be purchased and installed in NW1/4 NE1/4 Section 24, T. 25 S., R. 20 E. After installation, the catchment will be filled with water and the access to the catchment will be returned to as natural condition as possible to prevent vehicle and livestock from gaining access.

TESTING AND PRODUCTION

1. If production is established, the BLM, Coors Energy and the Utah Division of Wildlife Resources will enter into a Cooperative Agreement that provides for long-term monitoring of the bighorn sheep in the Little Canyon Area. The monitoring will focus on the possible impacts that oil and gas production may have on the resident herd.
2. Immediately upon completion of drilling, the location and surrounding area will be cleared of all debris resulting from the operation. All trash will be disposed of in the trash pit/cage. Non-burnable debris will be hauled to an approved sanitary landfill.
3. At the end of drilling operations and prior to reclamation of the reserve pit, the fourth side of the pit will be fenced and the top of the pit will be covered with netting of one inch or less to prevent access by birds.
4. The flare pit will be constructed in 6 feet of cut material and the fill material will be bermed up around the pit to help shield the visual impact of the flare. The end of the flare pipe will be located at the bottom of flare pit.
5. In lieu of removing the drilling mud and pit liner, the following requirements of this well will be followed in construction and reclaiming the reserve pit:
 - a. The pit liner will be installed in such a manner to assure it will not be punctured during installation or drilling operations.
 - b. Upon completion of drilling operations, the reserve pit will be de-watered. Depending on the conditions at the time of disposal, the waste water will be (a) disposed of off-site at an approved disposal facility, (b) reinjected with the appropriate Underground Injection Control Permit from the State Division of Oil, Gas and Mining with concurrent approval by the Bureau of Land Management, Moab District Office, or (c) allowed to evaporate.
 - c. The remaining reserve pit solids will be tested prior to stabilization. At least three samples will be taken from different areas of the pit. These samples will be analyzed by an independent laboratory for salt properties (electrical conductivity, sodium adsorption ratio and exchangeable sodium percentage), heavy metal content and oil and grease content. The results of these tests will be provided to the Moab District Office within 30 days of analysis.

- d. The reserve pit contents will then be solidified with a proper mixture of fly ash and kiln dust to stabilize the salt adhered to the cuttings. Quantities of solidifying agent will be sufficient to assure the physical properties of the stabilized pit are similar to the physical properties of the native subsoils.
 - e. The solidified contents will then be sampled and tested for leachability of salts and heavy metals. There will be a minimum of 5 samples taken from the solidified remains. The samples will come from each corner section of the pit and from the middle. These samples will also be analyzed by an independent laboratory. The results of this testing will be provided to the Moab District Office within 30 days of analysis.
 - f. The remaining liner material will then be folded over the edges of the solidified contents of the pit.
 - g. The solidified pit contents will then be covered by a minimum of one foot of native subsoils. If required, a thicker application may be allowed to bring the top of this cap nearly up to grade. The pit will then be allowed to set up for a minimum of 5 days prior to additional work on the pit involving the bentonite cap.
 - h. A bentonite cap will then be applied to the top of the pit. The bentonite will be a commercial grade and will be mixed with the native subsoils at the rate of 2-4 pounds per square foot of coverage. The cap will be at least 1 foot thick in the middle and grade to no less than 6 inches on the sides. The bentonite and subsoil mixture will be disked in to assure maximum effectiveness of the impervious cap. The cap will be crowned at the middle to allow proper drainage. The cap will extend at least 10 feet beyond the original pit boundaries to allow drainage away from the pit and prevent leaching of salts and heavy metals.
 - i. The bentonite cap will then be covered with approximately 2 feet of subsoil and topsoil. The intent is to bring the topsoil and subsoil mixture including the cap slightly above grade with enough soil to allow for revegetation and compensate for settling.
 - j. The Grand Resource Area Office will be kept informed of the timetables for all operations described above so that they can be witnessed. These procedures will be modified if the operator provides an alternate closures procedure that is approved by the authorized officer.
6. All permanent, above ground facilities associated with the well, tank battery, or surface pipeline that will remain longer than 6 months will be painted a flat, non-reflective, neutral color as specified by the authorized officer during construction of the production facilities. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.

7. Surface pipelines may be exempt from the requirements of flat, non-reflective, neutral colors if the rusting of the pipe surface will blend into the surrounding landscape and the rust color is approved in advance by the authorized officer.
8. If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain 1-1/2 times the storage capacity of the largest tank; all loading lines and valves will be placed inside the dike surrounding the tank battery.
9. The access road will be rehabilitated or brought to Resource (Class III) Road Standards within sixty (60) days of dismantling the drilling rig. If this time frame cannot be met, the Area Manager will be notified so that temporary drainage control can be installed along the access road.
10. A 24 foot wide cattle guard will be installed in an existing pasture division fence in the NE1/4 SE1/4 of section 26, T. 25 S., R. 20 E.
11. Tanker trucks will not haul oil from this well location during daylight hours in order to minimize impacts with recreationists. Any variation will be approved by the AO.
12. If a gas line is used to transport gas to the east of the well pad and over the cliff, the line will be an above ground surface pipeline installed during the testing phase. No dozers or other heavy equipment will be authorized for clearing vegetation along the pipeline route between the well pad and the cliff. Prior to the installation of the pipeline, the operator and the authorized officer will select a cross country access route and work area for the routing of the pipe over the rim of the cliff.
13. If a gas line is installed between the cliff and the existing corridor, the line will either be buried within a 25 foot wide surface disturbance or installed as an above ground surface line with no blading of the route as determined by the authorized officer when reviewing the associated right-of-way applications.
14. All pipeline anchors and support facilities will be kept to a low profile and will be flat, non-reflective, neutral colors.
15. Topsoil stockpiles will be spread over the reclaimed portions of the well pad, contoured and seeded. A portion of this topsoil would later be used for rehabilitation of the remaining portion of the well pad when it is abandoned.

REHABILITATION AND ABANDONMENT

1. The operator or his contractor will contact the Grand Resource Area BLM office in Moab, Utah (801-259-8193), 48 hours prior to starting rehabilitation work that involves earthmoving equipment or initiation of restoration measures.

2. In the event the road is graveled or surfaced, the material will be removed prior to recontouring the surface for rehabilitation.
3. The disturbed area will be recontoured and the topsoil will be spread over the recontoured area.
4. The surface will be scarified or ripped to a depth of 4 inches. The scarification will be perpendicular to the slope to intercept and retain runoff.
5. The area will be seeded between October 1 and December 31, using a pure live seed mixture as follows:

Indian Ricegrass	4 lbs/acre
Galleta	2 lbs/acre
Sand Dropseed	1/2 lbs/acre
Torrey Mormon Tea	1/2 lbs/acre
Winterfat	1 lbs/acre

If the seed is broadcast, the above rates will be doubled.

6. The reseeded well pad will be fenced. The fence will be maintained until a vegetative cover is established to control erosion and to blend into the surrounding landscape, and then the operator will remove the fence.
7. The access between Grand County Road #21 and the well location will be blocked to prevent access by vehicles or other uses.
8. Waterbars will be used on all sloping surfaces as shown below:

<u>GRADE</u>	<u>SPACING</u>
2%	200 ft. spacing
2-4%	100 ft. spacing
4-5%	75 ft. spacing
+5%	50 ft. spacing

C. REQUIRED NOTIFICATIONS AND APPROVALS

Required verbal notifications are summarized in Table 1, attached.

Spud- Written notification in the form of a Sundry Notice (Form 3160-5) will be submitted to the District office within twenty-four (24) hours after spudding (regardless of whether spud was made with a dry hole digger or big rig). If the spudding occurs on a weekend or holiday, the written report will be submitted on the following work day.

Undesirable Events/Immediate Reports- Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be immediately reported to the Resource Area in accordance with requirements of NTL-3A.

Cultural Resources- If cultural resources are discovered during construction, work that might disturb the resources is to stop, and the Area Manager is to be notified.

First Production- Should the well be successfully completed for production, the Assistant District Manager, Minerals Division will be notified when the well is placed in producing status. Such notification may be made by phone, but must be followed by a sundry notice or letter not later than five (5) business days following the date on which the well is placed on production.

A first production conference will be scheduled within fifteen (15) days after receipt of the first production report. The Resource Area Office will coordinate the field conference.

Well Completion Report- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted to the District Office not later than thirty (30) days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs, core descriptions, core analyses, well test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gas) will be submitted when requested by the Assistant District Manager.

Plugging and Abandonment- If the well is completed as a dry hole, plugging instructions must be obtained from the BLM, Moab District Office prior to initiating plugging operations. Table 1 of this document provides the after-hours phone numbers of personnel who are authorized to give plugging instructions.

A "Subsequent Report of Abandonment" (Form 3160-5) will be filed with the Assistant District Manager, Minerals Division within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the Area Manager or his representative, or the appropriate surface managing agency.

Venting/Flaring of Gas- NTL-4A allows venting/flaring of gas during the initial well evaluation period not to exceed 30 days or 50 MMcf. Venting/flaring beyond the initial test period threshold must be approved by the District Office.

TABLE 1

NOTIFICATIONS

Notify Rich McClure or Jack Johnson of the Grand Resource Area, at (801) 259-8193 for the following:

2 days prior to commencement of dirt work, construction or reclamation;

1 day prior to spudding;

50 feet prior to reaching surface and intermediate casing depths;

3 hours prior to testing BOPE;

12 hours prior to reaching kickoff point depth.

If the person at the above number cannot be reached, notify Fred Oneyear in the Moab District Office at (801) 259-6111 or at home at (801) 259-5937. If unsuccessful, notify one of the people listed below.

Well abandonment operations require 24 hour advance notice and prior approval. In the case of newly drilled dry holes, verbal approval can be obtained by calling the Moab District Office, Branch of Fluid Minerals at (801) 259-6111. If approval is needed after work hours, you may contact the following:

Dale Manchester, Petroleum Engineer	Office: (801) 259-6111
	Home: (801) 259-6239

Eric Jones, Petroleum Engineer	Office: (801) 259-6111
	Home: (801) 259-2214

If unable to reach the above individuals, please call the following:

Lynn Jackson,	Office: (801) 259-6111
Chief, Branch of Fluid Minerals	Home: (801) 259-7990



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Moab District
P. O. Box 970
Moab, Utah 84532

3160
(UTU-48755)
(U-065)

JUN - 9 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
Certified No. P 760 007 632

Mr. Doug S. Sprague
Coors Energy Company
14062 Denver West Parkway
P. O. Box 467
Golden, Colorado 80401

Dear Mr. Sprague:

*Sec 13, T25S R20E
43-019-31321*

We are in receipt of your letter of June 3, 1992 (copy enclosed), notifying the Moab District of your withdrawal of the Application for Permit to Drill (APD) the Federal 1-13WM on Federal lease UTU-48755 because Coors Energy Company is selling its current assets.

This letter acknowledges the withdrawal of the Coors Federal 1-13WM APD (copy enclosed) approved April 1, 1992, and rescinds the approval to conduct operations authorized by that APD. As a consequence of Coors Energy Company's decision to withdraw the APD, the suspension of operations and production granted July 31, 1991, effective July 1, 1991, for Federal leases UTU-48754, UTU-48755, UTU-48756, UTU-51245, UTU-54052 and UTU-61354 is terminated effective June 1, 1992.

The Bureau of Land Management now considers this APD file closed. In the event Coors Energy Company or a subsequent lessee requests an APD approval on this lease, such request will be treated as a new filing.

If you have any questions regarding this matter, please call Mr. Lynn Jackson in the Moab District Office at (801) 259-6111.

Sincerely,

/s/ Roger Zortman

District Manager

Enclosure:

- 1 - Coors Energy Company letter dated June 3, 1992
- 2 - Application for Permit to Drill - Federal No. 1-13WM

cc:

- WO-600, Hillary Oden (MS 5627) MIB (w/o Enclosures)
U-910, State Director, Utah (w/ Enclosure No. 1; w/o Enclosure No. 2)
U-922, Utah State Office (w/o Enclosures)
U-068, Grand Resource Area (w/o Enclosures)

DOGM (w/o encl.)

RECEIVED
JUN 12 1992

DIVISION OF
OIL GAS & MINING



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

June 22, 1992

Coors Energy Company
P.O. Box 467
Golden, Colorado 80402

Gentlemen:

Re: Well No. Federal 1-13WM, Sec. 13, T. 25S, R. 20E, Grand County, Utah
API No. 43-019-31321

In concert with action taken by the U.S. Bureau of Land Management, approval to drill the above referenced well is hereby rescinded. A new Application for Permit to Drill must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division of Oil, Gas and Mining immediately.

Sincerely,

Don Staley
Administrative Manager
Oil and Gas

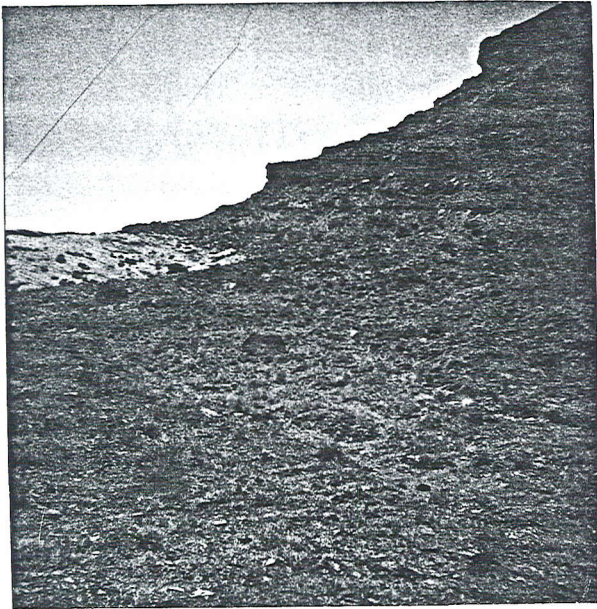
DME/lc

cc: R.J. Firth
Bureau of Land Management - Moab
Well file

WOI196

COORS PROPOSED WELL LOCATION #1-13 WM
NE/SE Sec 13, T25S, R20E

Well Pad

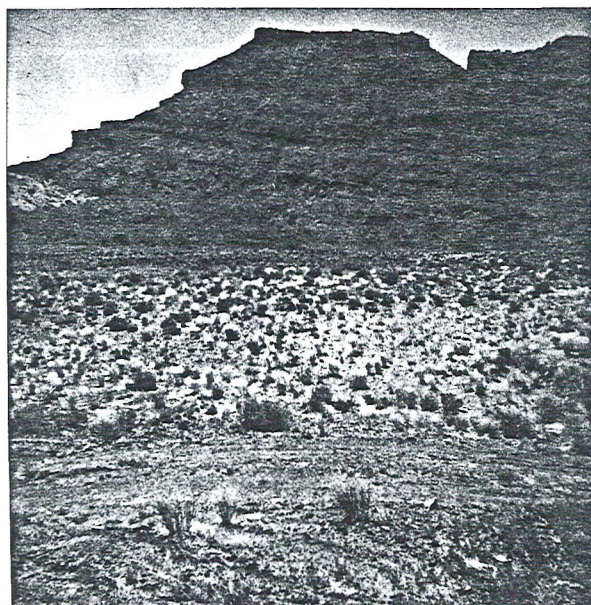


Looking southerly along east side of well pad.



Looking southerly along west side of well pad.

Proposed New Access



Looking southerly from Grand County
Class B road #21

Geist, V. 1975. On the management of mountain sheep: theoretical considerations. Pages 77-105 in J. B. Trefethen, ed. The wild sheep in modern North America. Proc. of the Workshop on the Management Biology of North American Wild Sheep. Boone and Crockett Club, New York, N.Y. 302 pp.

Hull, W.B. 1984. Seasonal nutrition of desert bighorn sheep in Canyonlands National Park, Utah. M.S. Thesis, Utah State University, Logan, Ut. 88 pp.

King, M.M. and Workman, G.W. 1984. Behavioral response of desert bighorn sheep to human harassment: A comparison of disturbed and undisturbed populations. Fourth year final report. BLM contract No. YA-533-CTO-1068. pp. 91-100.

Marcot, B.G., R.S. Holthausen, and H. Salwasser. 1986. Viable population planning. Chapter 6, pp. 49-62 in Wilcox, B.A., P.F. Brussard, and B.G. Marcot (Eds) The Management of Viable Populations-Theory, Applications and Case Studies. Center for Conservation Biology, Stanford University, 188 pp.

Moen, A.N. 1981. The biology and management of wild ruminants. Part III. Cornerbrook Press, Lansing, N.Y.

Weaver, R. 1986. Personal communications. Mr. Weaver indicated that all the desert bighorn ranges in the California Desert that were originally estimated to have less than 80 animals, no longer supported bighorn populations. The original estimates were made in the late 1950s and early 1960s. Grand Resource Area, Resource Management Plan

Grand Resource Area Environmental Impact Statement
BLM SVIM Soils Survey Data
RMP Supplemental Environmental Assessment
Soil Conservation Service, Soil Survey of Grand County, Utah, 1989

APPENDIXES

1. Site pictures
2. Pit and pad layout
3. Surface Use Plan
4. Recreation Opportunity Spectrum
5. VRM checklists and narrative
6. Excerpts from bighorn sheep harassment study
7. Public comments and BLM responses

MAPS

1. General location
2. Proposed access route and well location
3. Alternative access and Area of concern for bighorn habitat

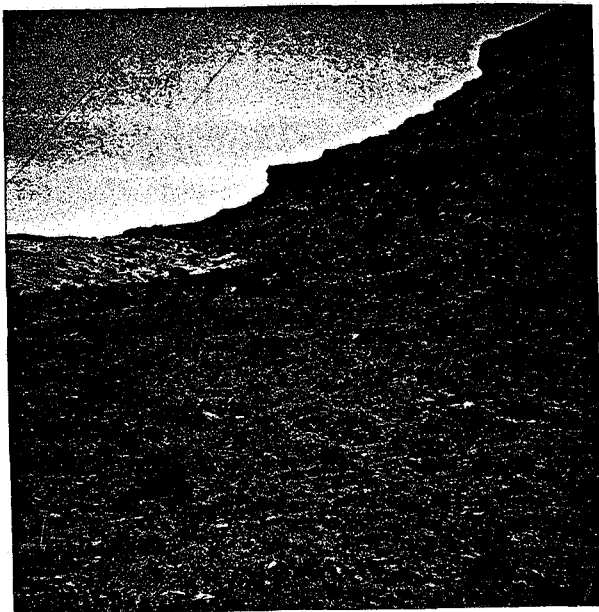
Environmental Impacts:

<u>Critical Element</u>	<u>Affected</u>		<u>Date</u>
	<u>Yes</u>	<u>No</u>	
Air Quality	---	<u>me</u>	<u>2/10/91</u>
T & E Plants	---	<u>me</u>	<u>2/10/91</u>
Floodplains	---	<u>me</u>	<u>2/10/91</u>
Farmlands	---	<u>me</u>	<u>2/10/91</u>
Water Quality	---	<u>me</u>	<u>2/10/91</u>
Cultural (surface)	---	<u>JA</u>	<u>2-21-91</u>
Paleontology	---	<u>JA</u>	<u>2-21-91</u>
T & E Animals	---	<u>JA</u>	<u>2-8-91</u>
Wetlands/Riparian	---	<u>JA</u>	<u>2-8-91</u>
ACECs	---	<u>Avit</u>	<u>2-8-91</u>
Wilderness	---	<u>Avit</u>	<u>2-8-91</u>
Wild & Scenic Rivers	---	<u>Avit</u>	<u>2-8-91</u>
V R M	<u>Avit</u>	---	<u>2-8-91</u>
Waste Hazardous/Solid	---	<u>R</u>	<u>5-17-91</u>

APPENDIX 1

COORS PROPOSED WELL LOCATION #1-13 WM
NE/SE Sec 13, T25S, R20E

Well Pad

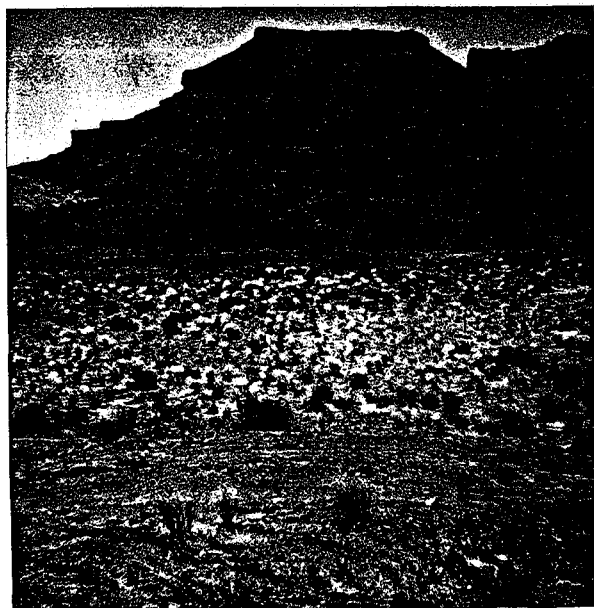


Looking southerly along east side of well pad.



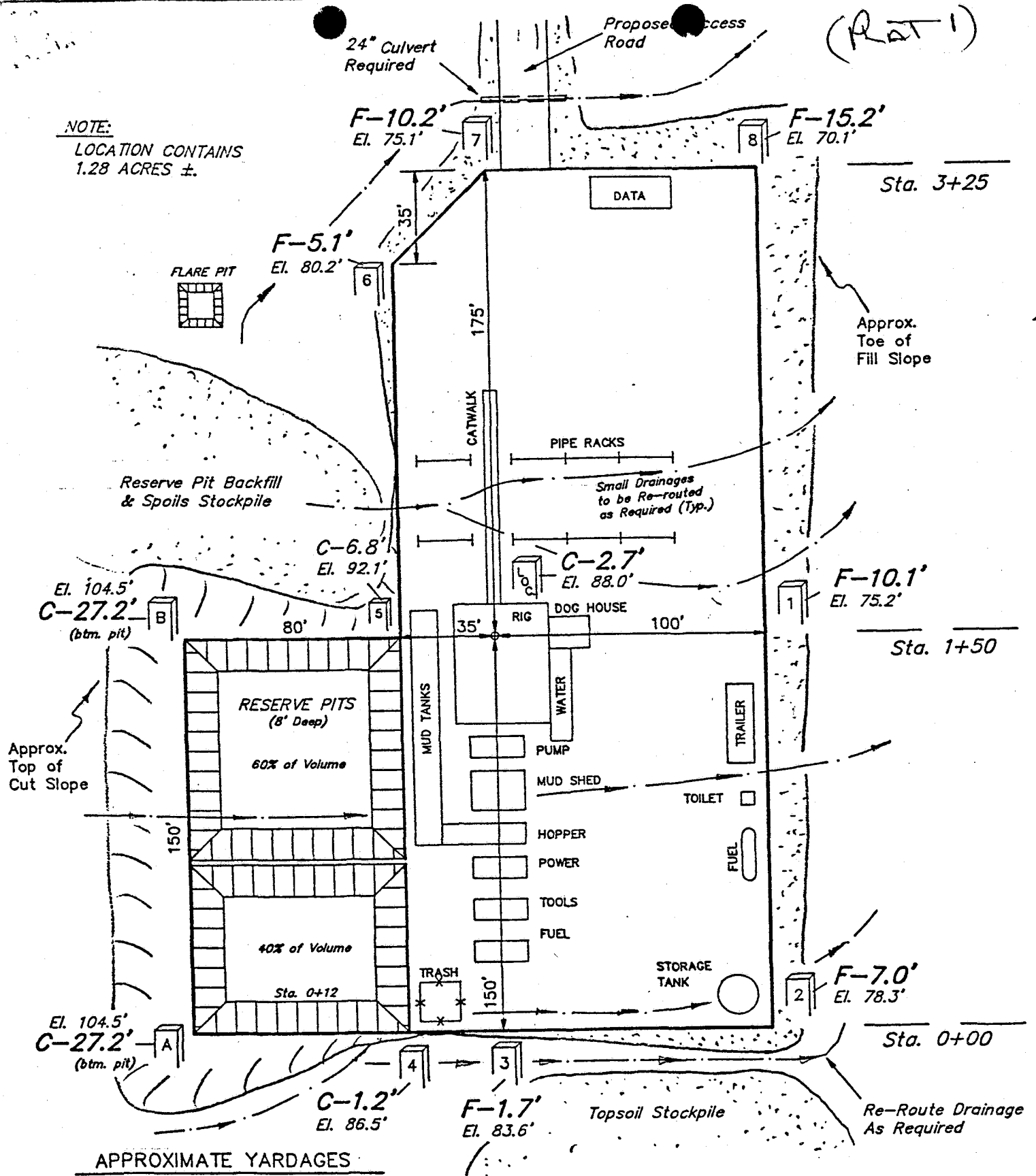
Looking southerly along west side of well pad.

Proposed New Access



Looking southerly from Grand County
Class B road #21

APPENDIX 2



(6") Topsoil Stripping = 1,030 Cu. Yds.
Pit Volume (Below Grade) = 2,520 Cu. Yds.
Remaining Location = 9,810 Cu. Yds.

TOTAL CUT = 13,360 CU.YDS.

FILL = 10,420 CU.YDS.

EXCESS MATERIAL AFTER
5% COMPACTION = 2,390 Cu. Yds.
Topsoil & Pit Backfill
(1/2 Pit Vol.) = 2,290 Cu. Yds.
EXCESS UNBALANCE
(After Rehabilitation) = 100 Cu. Yds.